Appendix A.
Public Outreach Summary

Table A.1. Ranking of oral comments provided at the first public input meeting, August 6, 2003, Napa Public Library

	Comment	"Votes"
1.	Guarantee hunting into the future	56
2.	Prohibit motor vehicles [allow foot and horseback only (36), allow foot, horseback, and bicycles (1)]	37
3.	Prohibit grazing (21) or use grazing only as a tool for wildlife habitat management or for restoring native plants (6)	27
4.	Develop and maintain hiking/equestrian trails as part of a regional trail system on public lands (several specific proposals were made)	21
5.	Allow limited-duration back-country camping	14
6.	Consider state wilderness designation	13
7.	Control invasive weeds and restore native grasses, oaks, and other plants (possibly through the use of prescribed fire)	12
8.	Manage for Tule Elk reintroduction	10
9.	Provide for limited motor vehicle access at Knoxville Wildlife Area	9
9.	Improve signage and provide interpretive displays and brochures (4), including some promoting fire-prevention awareness (5)	9
10.	Build and maintain ponds and water sources for wildlife	8
10.	Prohibit shooting except for hunting (i.e., no target shooting or plinking)	8
11.	Consider a portion of the areas for junior or limited-opportunity hunts (e.g., junior turkey hunts)	5
11.	Prohibit commercial activity	5
11.	Prohibit hunting	5
11.	Schedule non-overlapping periods for hunting and non-hunting activities	5
12.	Adopt a regional management perspective (e.g., consider that recreational opportunities already existing on nearby public lands [e.g., target shooting] need not be also provided by DFG, or that some activities [hiking and backpacking] may require consistent regulations across management units)	4
13.	Allow target shooting in designated areas	3
14.	Provide a roadside emergency phone or cell phone service	2
14.	Establish a monitoring program for human impacts	2
14.	Restrict bicycles to motor vehicle routes	2
15.	Provide more access points through fences	1
15.	Develop a policy for as yet unknown demands for future use	1
15.	Provide designating parking areas	1
15.	Coordinate law enforcement with other agencies (share staff)	1
15.	Ensure management plan protects the rights of private landowners	1
15.	If additional roads are provided, restrict access to street-legal vehicles	1

Table A.2. Ranking of oral comments provided at the second public input meeting, October 30, 2003, Woodland Public Library.

	Comment	"Votes"
1.	Consider the impact of wildlife area management on surrounding private lands	18
2.	Manage Knoxville as a State Wilderness Area	16
3.	Guarantee hunting into the future	9
4.	Consider linking Knoxville to the Blue Ridge Trail	6
5.	Assess whether any existing roads can be used for vehicular access	5
5.	Encourage youth hunting opportunities	5
6.	Develop a fire prevention/response plan (especially addressing campfires and protection of natural values)	4
6.	Integrate these wildlife areas into a regional trail system	4
7.	Prohibit livestock grazing	3
7.	Provide more foot access entry points for the public (i.e., gaps in fences)	3
7.	Make Knoxville a type B wildlife area	3
8.	Keep invasive plants out and keep working to eradicate existing invasive plants (especially yellow starthistle) and promote native bunch grasses	2
8.	Place low emphasis on prescribed burns and high emphasis on elk for vegetation management	2
8.	Improve signage to prevent trespass onto private land	2
8.	Do not allow reseeding (especially with exotic species) after fire	2
8.	Provide interpretive signage with an emphasis on "leave no trace" ethics and also providing general information on the area	2
8.	Prohibit wind generation facilities at Knoxville	2
9.	Route trails away from sensitive plant and wildlife areas	1
9.	Define parking areas	1
9.	If horses are allowed, add horse pass-throughs in fences	1
9.	Allow remote camping	1
9.	Do a recreation assessment of the area to decide what to do with old roads (keep them as trails or remove them). They need attention either way to prevent erosion.	1
9.	Allow only non-mechanized access and management techniques	1
9.	Use fire as a weed management tool	1
9.	Develop a management plan for stock ponds to assess each pond's long-term viability, value for wildlife, and to prevent erosion. Consider habitat improvements around ponds (especially for elk).	1
9.	Remove old barbed-wire fences from the interior of Knoxville	1
9.	Keep Knoxville as a Type C wildlife area	1

Table A.3. Summary of written comments for the Knoxville Wildlife Area.

	Comment	Times mentioned
1.	Prohibit motor vehicles	15
2.	Consider state wilderness designation	12
3.	Develop trails in general (2), or as part of a regional trail system on public lands (some specific proposals were made) (7)	9
4.	Allow for access by foot travel only (1), for foot and horseback only (3), for foot, horseback, and bicycles (bikes at least in areas where won't be detrimental to land) (2), and for trails that can accommodate deer-carts and bikes (1)	7
5.	Guarantee hunting into the future (3) especially for turkeys (1)	4
6.	Provide designating parking areas (3) but as numerous small pullouts instead of a few large parking lots (1)	4
7.	Manage for multiple uses (3) with zoning if necessary (1)	4
8.	Allow camping (2) but keeping sites 4-6 miles apart (1)	3
9.	Provide adequate enforcement of regulations	3
10.	No roads	2
11.	Provide for limited motor vehicle access away from the main road for seniors and handicapped	2
12.	Prohibit hunting	2
13.	Keep land as natural as possible (1) and manage to enhance or restore values of the habitat/resources (1)	2
14.	Improve signage in general (1) and to provide interpretive displays on fire-prevention awareness (1)	2
15.	Protect the area from fire by constructing firebreaks (1) and banning summer/fall fires (1)	2
16.	If grazing is allowed, use it as a tool for restoring native plants (1) or for fire management (1)	2
17.	If roads are provided, keep them well maintained	2
18.	Toilets are needed in all designated parking and hiking areas	1
19.	Consider a land swap: KWA gets some land from adjacent BLM, and DFG's Cedar Roughs parcel goes to BLM	1
20.	Build /maintain ponds and water sources for wildlife and people	1
21.	Restrict vehicular traffic to DFG management/enforcement personnel	1
22.	No shooting	1
23.	If recreational shooting is allowed, restrict it to a small area	1
24.	No Camping; day-use only	1
25.	Restrict non-hunting uses to minimize potential accidents and to decrease the risk that pressure from non-hunter-users will some day result in KWA being closed to hunting	1
26.	Fence in all protected areas	1
27.	Prevent erosion by preventing fire and overgrazing	1

Appendix B.
Methods and Results for Biological Surveys

❖ Surveys for Non-native Invasive Species

Invasive plant surveys concentrated on two vegetation types, grasslands and riparian areas, and targeted non-native species that have been recognized as transformers (i.e., those with (1) abundances that become disproportionately high compared to native species, that (2) transform natural processes and cycles, such as fire frequency, hydrology, decomposition, and that (3) greatly reduce or eliminate native species) and for which some measure of control is feasible. Different methods of surveying and recording were used for each vegetation type.

Grassland Survey Methods and Results

Survey units were defined by the polygons classified as California Annual Grassland or Serpentine Grassland on the Napa County MCV Vegetation Map.

Each grassland polygon was visited by a surveyor (Paul Aigner or Cathy Koehler) who estimated the percent cover of all target species (Table B.1). Most grassland polygons within the KWA were visited except for some small and isolated polygons at the south end of the Wildlife Area. Percent cover was estimated using eight categories (absent, <1%, 1-5%, >5-25%, >25-50%, >50-75%, >75-95%, and >95%). In polygons where target species were not homogenously distributed, the surveyor subdivided polygons into smaller more homogenous units, by drawing on paper maps in the field. These subdivided polygons and percent cover estimates were later entered into ArcMap. Surveys were conducted throughout the year, because most weeds could be identified by both fresh and dried growth.

Table B.1: Target species for grassland surveys.

Common name	Scientific name	Map
Non-native species		
Black mustard	*Brassica nigra*	B.1
Bull thistle	*Cirsium vulgare*	B.2
Goat grass	*Aegilops triuncialis*	Not found
Harding grass	*Phalaris aquatica*	B.3
Italian thistle	*Carduus pycnocephalus*	B.4
Medusa head*	*Taeniatherum caput-medusae*	B.5
Perennial pepperweed	*Lepidium latifolium*	B.6
Teasel	*Dipsacus sylvestris*	Not found
Yellow starthistle	*Centaurea solstitialis*	B.7
Native species		
Needle grass	*Nasella spp.*	B.8

* Cover estimated in a subset of survey units.

Because grasslands were heavily dominated by non-native annual grasses (in particular oat grass (*Avena fatua* and *Avena barbata*), soft chess (*Bromus hordeaceus*), rip-gut brome (*Bromus diandrus*), medusa head (*Taeniatherum caput-medusae*) and wild rye (*Lolium multiflorum*)) and these grasses were largely ubiquitous throughout the KWA, presence and cover of the species was not estimated (except that the cover of medusa head was estimated in a subset of survey units). In addition to target weeds, surveyors also estimated cover of the native bunchgrass (*Nasella* spp.).

Figure B.1. Distribution of black mustard (*Brassica nigra*) at the Knoxville Wildlife Area (2003-2004).

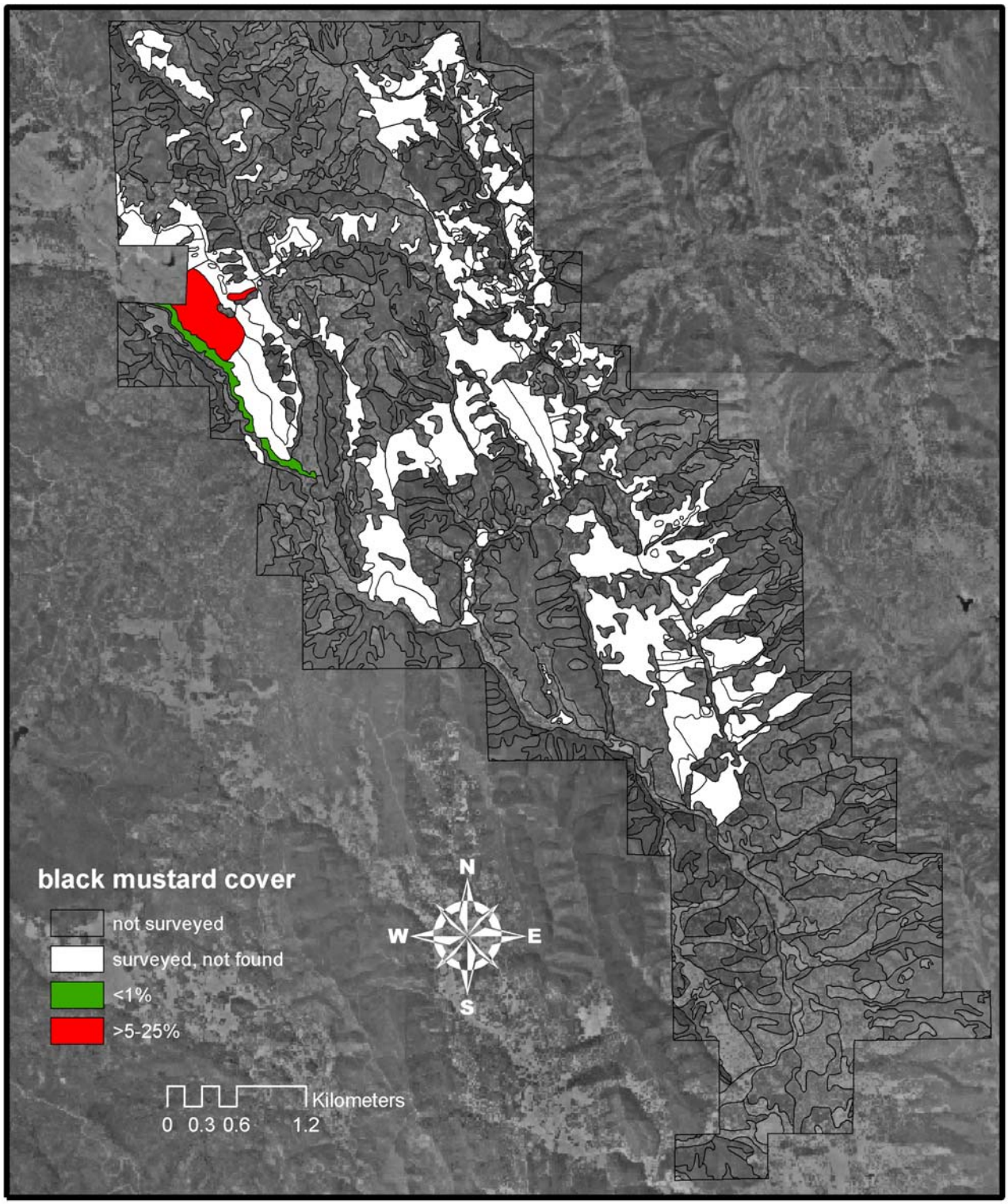


Figure B.2. Distribution of bull thistle (*Cirsium vulgare*) at the Knoxville Wildlife Area (2003-2004).

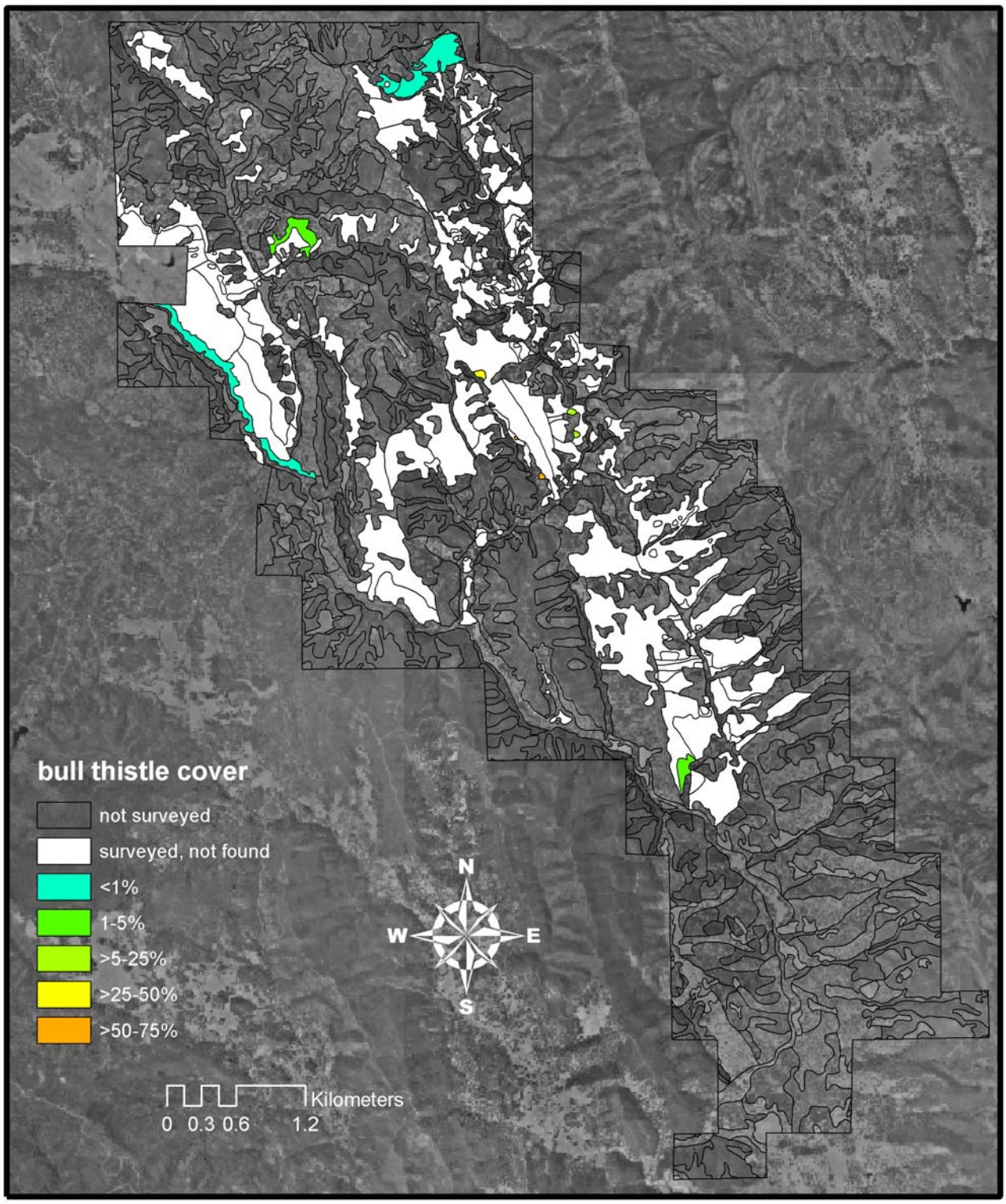


Figure B.3. Distribution of Harding grass (*Phalaris aquatica*) at the Knoxville Wildlife Area (2003-2004).

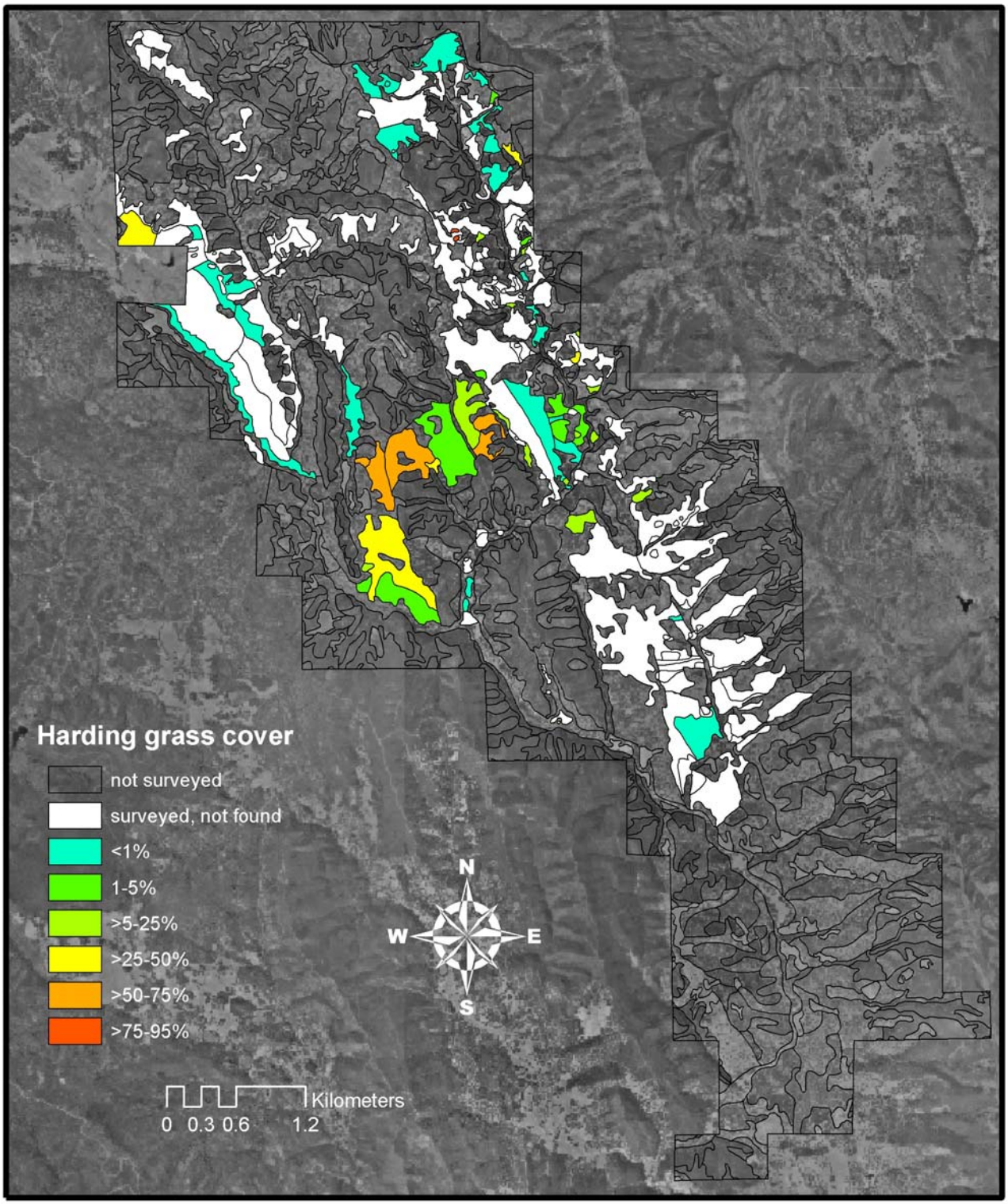


Figure B.4. Distribution of Italian thistle (*Carduus pycnocephalus*) at the Knoxville Wildlife Area (2003-2004).

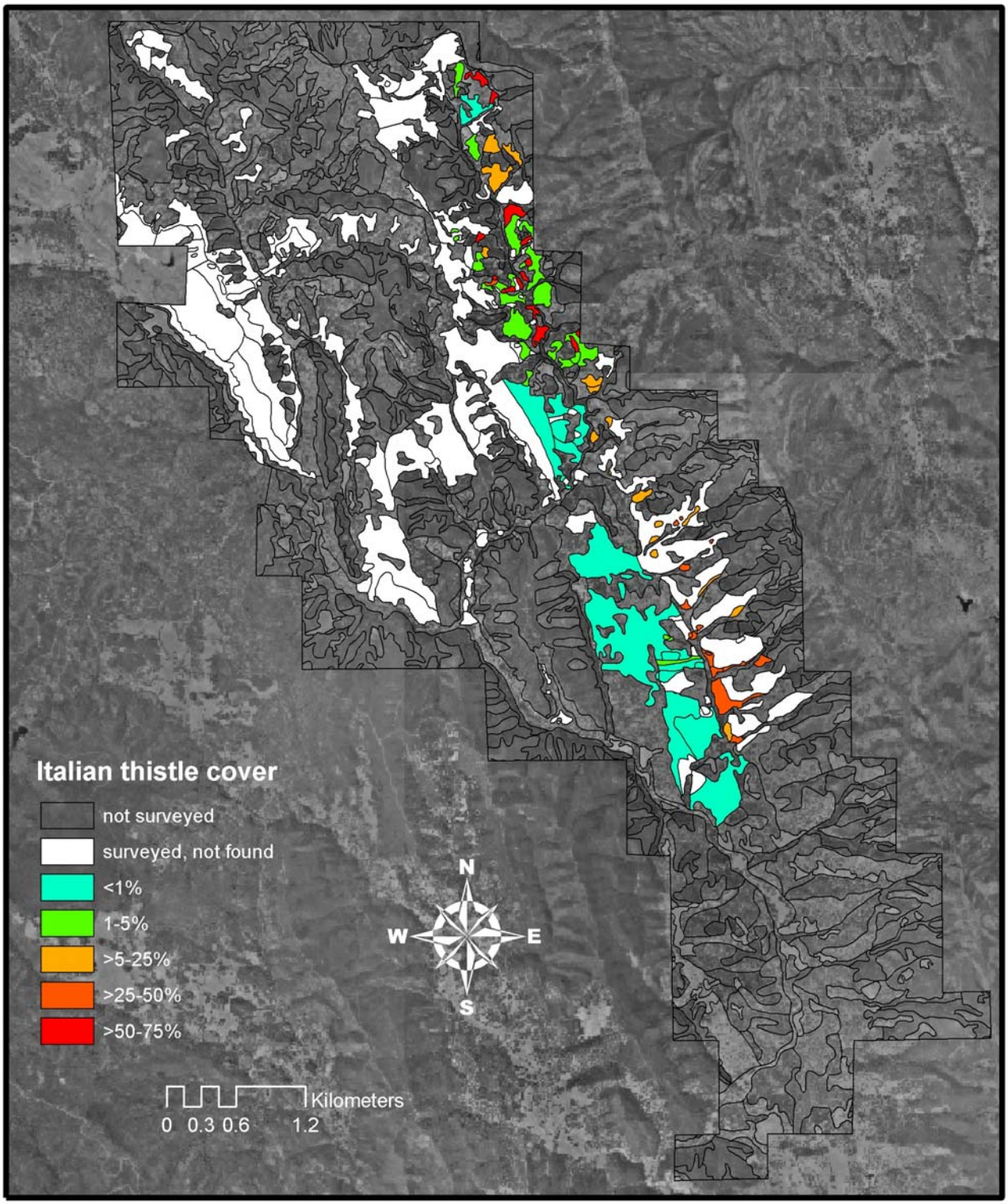


Figure B.5. Distribution of medusa head (Taeniatherum caput-medusae) at the Knoxville Wildlife Area (2003-2004).

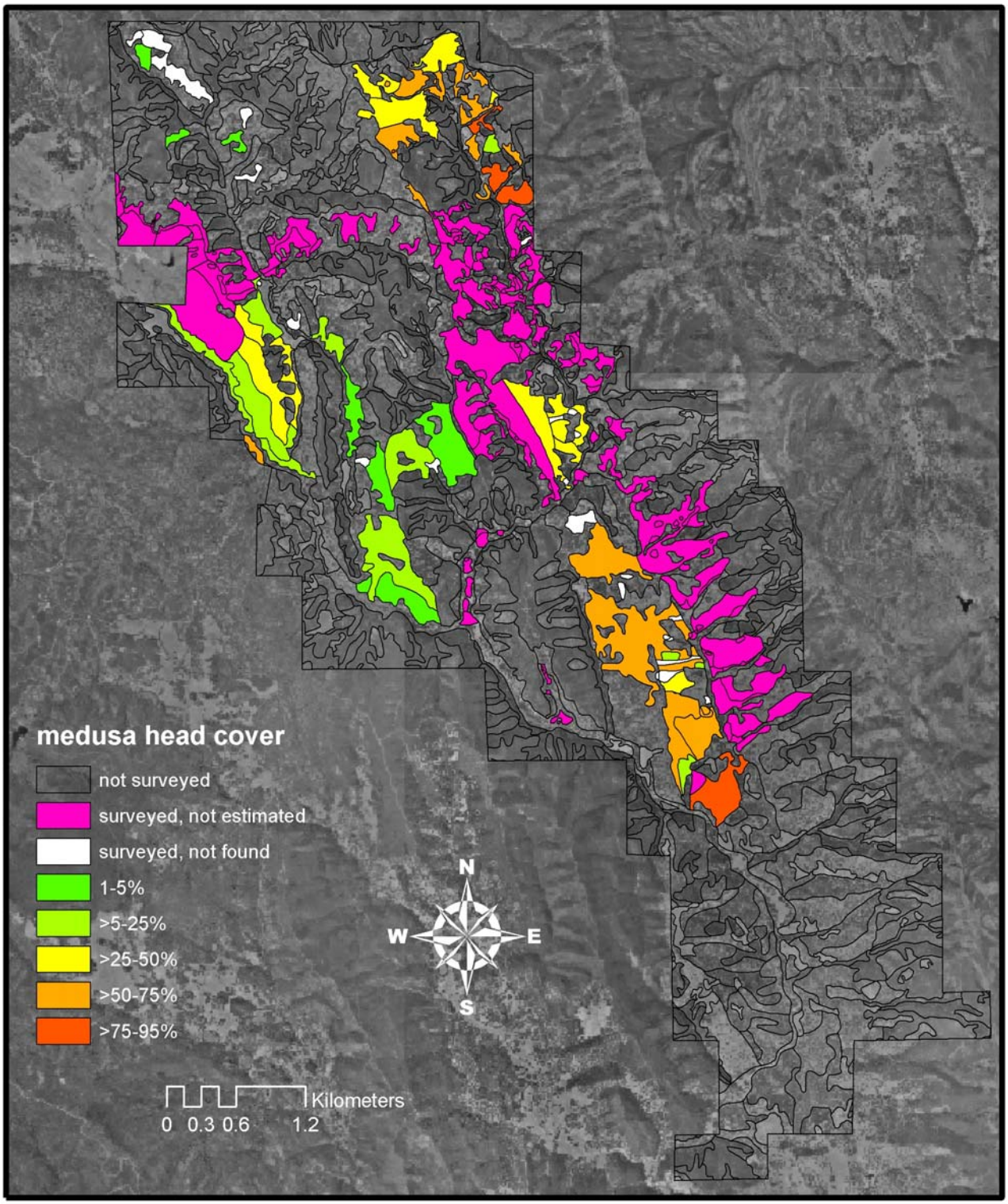


Figure B.6. Cover of perennial pepperweed (*Lepidium latifolium*) at the Knoxville Wildlife Area (2003-2004).

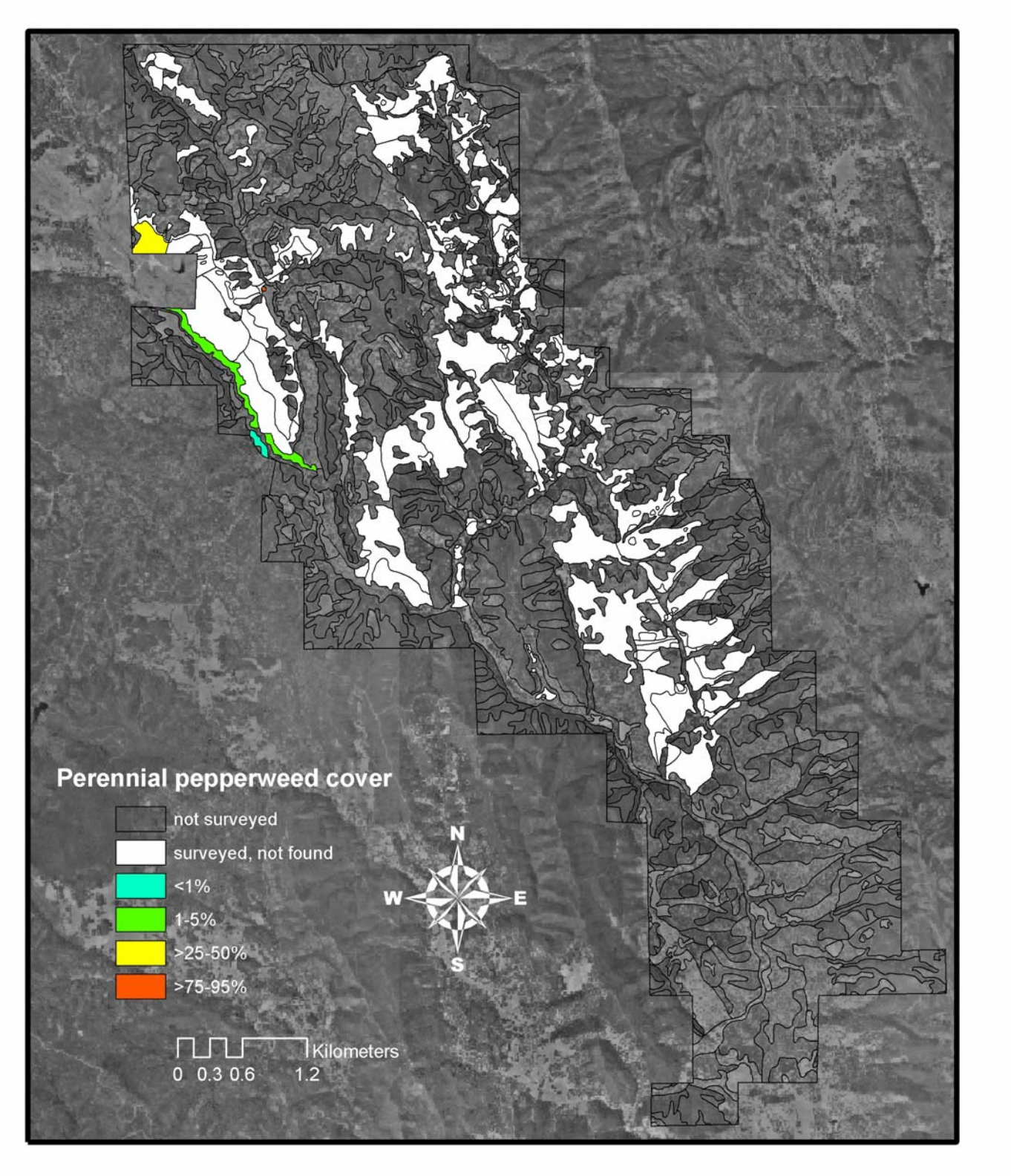


Figure B.7. Cover of yellow star thistle (*Centaurea solstitialis*) at the Knoxville Wildlife Area (2003-2004).

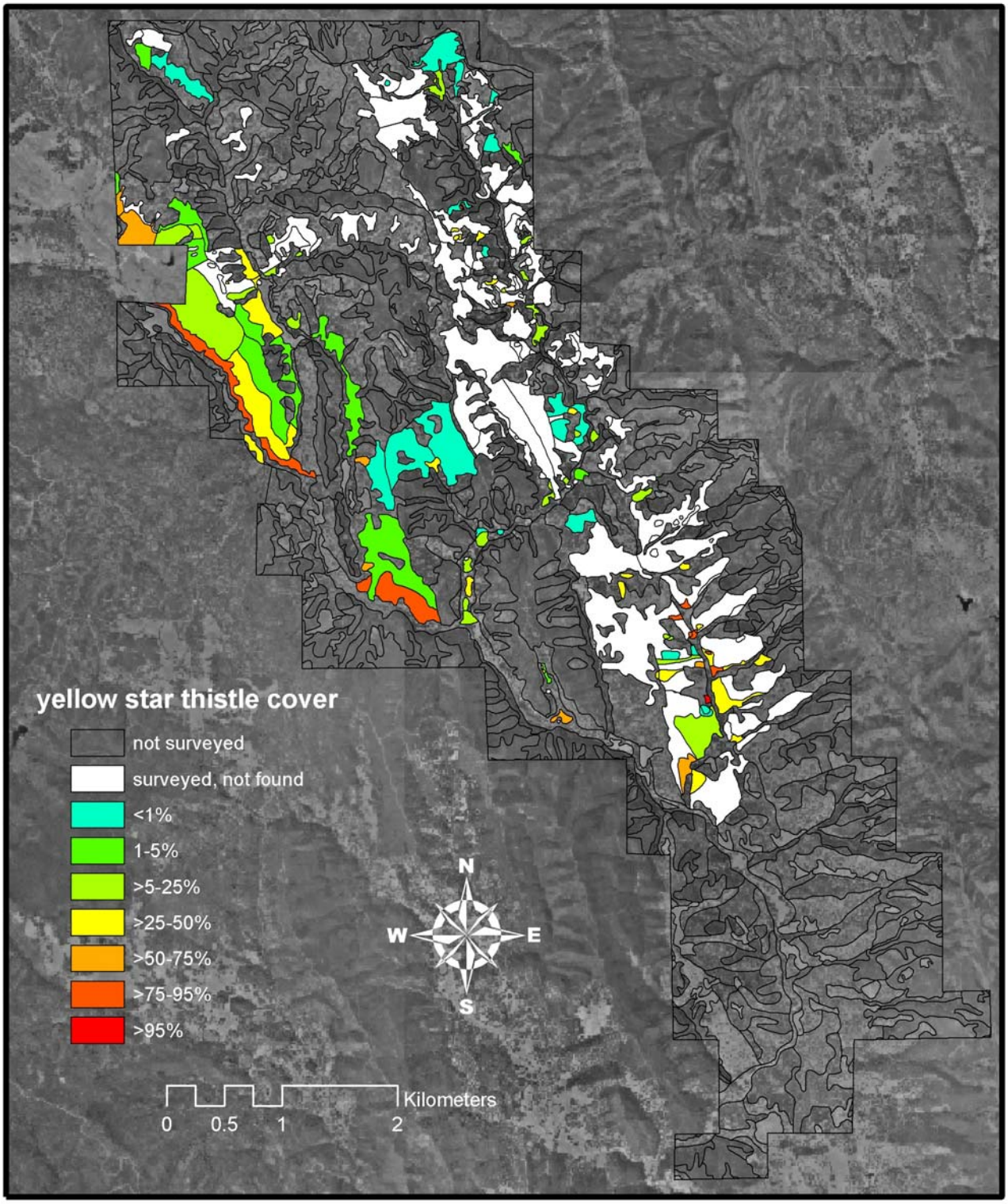
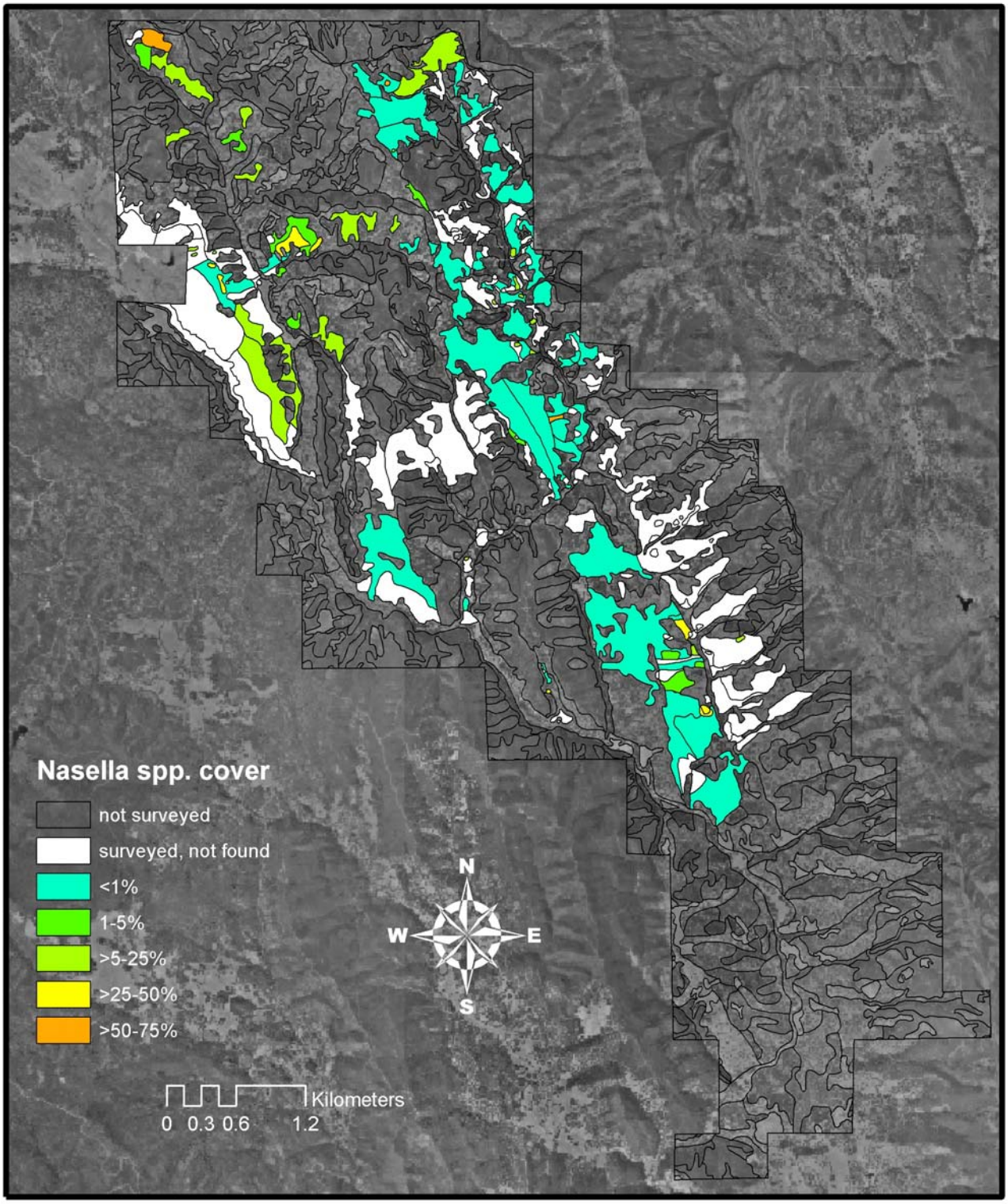


Figure B.8. Cover of needle grass (*Nasella* spp.) at the Knoxville Wildlife Area (2003-2004).



Riparian Survey Methods

Two riparian surveys were conducted by Jake Rugyt. The purpose of these surveys was to characterize the riparian vegetation (including native species) and to determine the distribution of non-native invasive species. The first survey was conducted on June 21, 2003. During this survey, three reaches of Knoxville/Eticuera Creek were visited and qualitatively characterized in terms of the abundance of native and non-native species (Figure B.9). A second survey was conducted between June 19 and September 4, 2004. This survey focused on Eticuera creek, starting in Long Canyon and continuing to about x kilometers north of the southern boundary of the KWA (Figure B.9, B.10[A-C]). During this survey noteworthy native and non-native species were recorded with a GPS unit.

Riparian Survey Results—Survey of June 21, 2003

Segment 1: Knoxville Creek - corral to homesite (Figure B.9).

This drainage is strongly influenced by serpentinitic soils and substrate particularly during the dry season when flow is maintained by a number of springs eminating from the serpentine bedrock. These conditions plays an important part in the current infestation of this stream by Tamarix parviflora and Lepidium latifolium, two species that tolerate alkaline waters. Species observed are listed in Table B.2.

Table B.2. Species observed along riparian survey segment 1 (Knoxville Creek). Asterisks following species names indicate non-native species.

Growth form	Species	Abundance
Tree	*Pinus sabiniana*	One individual on bench.
Tree	*Aesculus californica*	8 individuals clustered or widely scattered.
Tree	*Populus fremontii*	Recently planted in channel.
Shrub	*Salix breweri*	3 individuals in channel
Shrub	*Tamarix parviflora* *	Several resprouting from rootstock.
Shrub	*Rhamnus tomentella tom.*	5 Individuals scattered.
Shrub	*Sambucus mexicana*	One individual on bank.
Perennial	*Scirpus americanus*	Common in channel in broken stand.
Perennial	*Juncus mexicanus*	Patchy in channel
Perennial	*Lotus corniculatus* *	Intermittent dense patches along channel.
Perennial	*Stachys albens*	Scattered along entire reach.
Perennial	*Artemisia douglasiana*	Patchy along floodplain.
Perennial	*Leymus triticoides*	Patchy on floodplain.
Perennial	*Lepidium latifolium* *	Patchy along channel and follows some small tributairies into the hills to the east.
Perennial	*Hordeum brachyantherum calif.*	Uncommon on floodplain.
Perennial	*Piptantherum miliaceum* *	Scattered along banks.

Perennial	*Elymus glaucus*	Localized on banks.
Perennial	*Phalaris aquatica* *	Scattered on floodplain.
Perennial	*Asclepias fascicularis*	Uncommon on floodplain.
Perennial	*Typha domingensis*	Few patches in channel.
Perennial	*Heliotropium curassavicum*	Scattered along channel.
Annual	*Helianthus bolanderi*	Local along channel.
Annual	*Centaurea solstitialis* *	Broken stands on floodplain.

Segment 2: Knoxville Creek - near the mouth of Foley Creek (Figure B.9).

This reach of the creek may require some restoration. It may also supply some stock for the restoration of segment 1. This area is likewise influenced by serpentine although probably less so than the previous segment. This is a better-developed riparian corridor although the canopy cover is broken. Species observed in this reach are listed in Table B.3.

Table B.3. Species observed along riparian survey segment 2 (Knoxville Creek). Asterisks following species names indicate non-native species.

Growth form	Species	Abundance
Tree	*Populus fremontii*	Two individuals, including one large specimen.
Tree	*Quercus lobata*	Discontinuous gallery.
Tree	*Pinus sabiniana*	A few individuals on bank.
Shrub	*Sambucus mexicana*	One individual on bank.
Shrub	*Rhamnus tomentella*	Several scattered individuals on bank.
Shrub	*Rosa californica*	Scattered patches on bank.
Shrub	*Rhus trilobata*	Frequent in patches on bank
Shrub	*Salix* spp.	Uncommon.
Perennial	*Stachys albens*	Scattered in small patches, edge of channel.
Perennial	*Scirpus americana*	In discontinuous stand in channel.
Perennial	*Lepidium latifolium* *	Low numbers along channel.
Perennial	*Juncus mexicanus*	In small patches in channel.
Perennial	*Angelica tomentosa*	Uncommon along channel.
Perennial	*Festuca arundinacea* *	In dense patches on banks in open areas.

Segment 3: Lower Eticuera Creek near south end of KWA (Figure B.9).

This area is not markedly influenced by serpentine but rather by the sedimentary geology. The canopy is open with a mixture of *Quercus douglasii*, *Q. lobata* and *Q. wislizenii.* Species observed in this habitat are listed in Table B.4. These species were associated with the above three tree species.

Table B.4. Species observed along riparian survey segment 3 (Eticuera Creek). Asterisks following species names indicate non-native species.

Shrub	*Baccharis salicifolia*	A few scattered individuals on the streambed.
Shrub	*Rhus trilobata*	In scattered patches on the bank.
Shrub	*Tamarix parviflora* *	Scattered seedlings and resprouting stumps.
Shrub	*Ailanthus altissima* *	In patch in stream.
Shrub	*Brickellia californica*	Scattered individuals on streambed.
Vine	*Clematis ligusticifolia*	Few individuals localized on bank.
Perennial	*Datisca glomerata*	Few individuals scattered on streambed.
Perennial	*Helenium puberulum*	Uncommon at edge of streambed.
Perennial	*Asclepias eriocarpa*	Occasional in and along stream.
Perennial	*Asclepias fascicularis*	Scattered patches or individuals on streambed.
Perennial	*Phyla nodiflora* *	Scattered individuals + localized patches, streambed
Perennial	*Scirpus americanus*	In scattered patches on streambed.
Perennial	*Heliotropium curassavicum*	Uncommon on streambed.
Perennial	*Lotus corniculatus* *	Scattered patches on stream margin.
Perennial	*Xanthium strumarium*	Localized in patches on streambed.
Annual	*Melilotus albus* *	Localized in patches on stream margin.
Annual	*Melilotus indicus* *	Localized in patches on streambed

Riparian Survey Results—Survey of June-September, 2004

Results of this survey appear in Table B.5.

Table B.5: Species encountered during a survey of Eticuera Creek conducted June 19 through September 4, 2004. The "location" column refers to points mapped in Figure B.10.

Location Fig. B.10	**Species**
June 19, 2004	
no GPS	Phalaris – 1, 15 ft linear,next to corral.
009	Phalaris and Dactylis, 2, on terrace mixed w/ Perideridia kelloggii and Xanthium str.
010	Phalaris – 1, on floodplain with Asclepias eriocarpa.
011	Phalaris and Dactylis, 2, on terrace with Piptatherum [turtle].
APAN	Phalaris 1, on floodplain.

012	Phalaris + Dactylis, 2, on terrace with Piptatherum and Xanthium str.
013	Phalaris 5, on north slope above creek.
014	Phalaris + Cynodon, 3, on creekbed and bank with Trifolium fragiferum and Lotus corn.
015	Cynodon, Dactylis & 1 Tamarix, 3, on bed and terrace.
016	Dactylis, 4 on bank under QUWI.
017	Populus fremontii, 3, 5-14" trees near rock gap; with pool.
018	Centaurea solstitialis, 5, on bank; Nicotiana bigelovii in creek.
019	Cirsium vulgare, 5, on slide [Luzuli Bunting]; disturbed.
020	Rosa californica, robust stand for collection.
021	Dactylis; Rosa cal. For collection [turn-around' road crossing.
022	Lepidium latifolium, scattered in dense Centaurea solstitialis.
024	Lepidium with Phalaris, 3, terrace and margin of bed.
025	Lepidium lat., 1, band 25' x 4 ft long; creekbed.
026	Tamarix, 2, numerous resprouts.
027	Populus fremontii; post-fire resprouts [large tree north].
028	Tamarix, resprouts 4-5 ft. w/ Glyceria.
029	Malacothamnus helleri, 1 plant at roadside under Glyccirhiza.
July 24, 2004	
032	Festuca arundinacea, (many), Phalaris, 100 ft. +, on lower terrace (numerous 2-3" fish)
No GPS	Glyceria sp., Tamarix (6+ft.); Asclepias fascicularis & A. eriocarpa [Monarch butterflies]
033	Tamarix, 4, resprouts (6-8 ft); Phalaris –few.
034	Tamarix, 2, resprouts; Antirrhinum vex. in riparian woodland; Paspalum distichum.
035	Phalaris, 4, + 1 Tamarix; Centaurea solst. At edge of dry streambed.
036	Tamarix, 6 resprouts, Lepidium – parasitized; gravelbar w/ Phalaris + Centaurea sol.
037	Cynodon dactylon at center of dry channel; Lepidium latifolium – 20 ft patch.
038	Cynodon, 15 ft. strip on streambed.
039	Apocynum cannabinum; Melilotus albus – 50 ft. band.
August 30, 2004	
047	Helianthus bolanderi (exilis), Brickellia cal., Euphorbia supina, Centaurea solst.dense on banks, esp. southwest. Trichostema laxum 36" stems, 32 " tall and 52 " wide. Eremocarpus setigerus on rocky creekbed.
048	Piptatherum mil. – 20 x 10 ft on east bar. Glycyrrhiza, Xanthium str., Cynodon on bed.
No GPS	Asclepias eriocarpa and A. fasc. Crypsis schoen. And Heliotropium cur. On bed. Stachys stricta, Equisetum laev., Helianthus to 50" tall. [bee hives in QULO).
049	(Acc. to 24 ft.) Festuca arundinacea, w/ Melilotus albus 50 x 20 ft. Piptatherum on inside bar, Cynodon on bed in patches 5-15 ft across. Datisca, Salix, Juncus mex., Cornus glabrata, QULO, Scirpus pungens –

	1 plant 42" tall. Apocynum cannabinum (previous collection site ?).
050	Melilotus albus – 45 x 6 ft. on east streamside. Vitis californica, Asclepias eriocarpa, Leymus triticoides, Artemisia douglasiana on bank. Xanthium strumarium and Crypsis shoen. On bed.
051	Cynodon, Crypsis shoen. on bed. QUWI, Helianthus bolanderi, Xanthium strum., Brickellia – few. Phalaris aquatica on bars. Piptatherum on bed and bank, scattered. Lepidium latifolium on bed in open stand. Centaurea solst. on west bar with Hirshfeldia.
052	Melilotus albus scattered. Juncus oxymeris? Juncus mexicanus, Hoita macrostachya, Scirpus pungens. Piptatherum on inside bar with Phalaris aquatica – open stand. Datisca glomerata.
053	Road crossing. Pool with fish. Typha latifoia ? Melilotus albus. Salix lasiolepis recruitment. Helenium puberulum. Equisetum laevigatum on bed. Marrubium vulgare – one plant.
054	Centaurea solstitialis on east side bar. Brickellia, Solidago canadensis (?) 48" tall. Asclepias fascicularis – 45" tall. Datisca – 7' tall, dormant. Piptatherum miliaceum and Melilotus albus – dense on gravel bar. Pool – 60 ft long and about 3 ft deep. Salix dominant. Baccharis salicifolia.
055	Phalaris aquatica, Melilotus on bank – 25 x 8 ft. Scirpus pungens, Equisetum laevigatum on bed. Vitis, Salix, Rhus, QULO, Artemisia dougalsiana, Juncus mexicanus.
056	Melilotus dense on both sides of creek, Helianthus bolanderi – 6 ft tall.
057	Tamarix – 2 resprouting stumps. Clematis ligusticifolia. Phyla nodiflora on bed. Eriodictyon on bar. Eriodictyon on bar. Centaurea solstitialis on bed and bar with Piptatherum and Melilotus albus. Rubus ursinus, Cercis occidentalis. Pool at inlet of tributary channel. Equisetum laevigatum – common. Frogs numerous [body 1" long; banded on hindlegs, 3 dark]. Populus fremontii. Stream flow.
058	Scirpus pungens – dense. Few Xanthium. Hoita. Macro., Salix, Rhamnus californica, Holodiscus discolor, Rubus ursinus, Cercis occidentalis.
059	Robinia pseudo-acacia – 4 trees and few saplings. Melilotus albus – in patches. Plants mostly native here – Datisca, Salix, QULO, Rubus ursinus, Scirpus pungens, Hoita macro., VICA.
060	Melilotus albus – dense band on both banks to south. Continuous streatch of surface water; numerous 3" long fish and frogs. Quail, water snake.
061	Tamarix – resprouting stumps. Melilotus still in band on banks here. Bees in oaks. End of surface water. Typha. House wren?
062	Tamarix – 7 resprouting stumps about 30 ft apart and to 8 ft tall. Populus, Xanthium, Eremocarpus, Glycyrrhiza patch 50 ft x 15 ft. Heliotropium. Some Centaurea solstitialis on bed. Brickellia. Black Phoebe. Asclepias fascicularis and A. eriocarpa scattered. Cynodon patches.
No GPS	Piptatherum and Melilotus on west bank with few Phalaris – 100 x 25 ft.
063	Tamarix – 7 resprouting stumps 8 ft tall with Melilotus albus to 8.5 ft tall. Clematis ligusticifolia. Small Populus fremontii – 12 ft tall.

064	Lepidium – 1 vegetative plant. Melilotus in dense band at edge of stream bed. Pool 15 x 10 x 1 ft deep. Helianthus bolanderi – 88" tall.
065	Tamarix – resprouting stump 9 ft tall. Melilotus albus still in dense swath on both sides of stream. Lepidium latifolium in vegetative patch 5 ft circle.
066	Road crossing. Paspalum distichum, Typha domingensis – extensive stand, Equisetum laevigatum, Lotus corniculatus, Trifolium fragiferum on bar.
067	Melilotus albus (dry) – in dense band on west stream edge. Lepidium latifolium – few plants on stream bed. Solid bed rock along section of stream bed here.
068	Tamarix – resprouting stump, 4 ft tall. Phyla, Paspalum distichum, Melilotus band, Phalaris aquatica scattered. Piptatherum . Lepidium on west bank. Sonchus asper rosettes on bed.
069	Phyla, Lepidium lat., Crypsis shoen. on bed. Populus saplings. Salix lasiolepis, S. exigua, Artemisia douglasiana, Heliotropium, Brickellia, Stachys stricta.
070	Tamarix – one resprouting stump, 8 ft tall. Datisca, QUDU, Salix, Scirpus pungens.
071	Populus – one tree – 20-25 ft tall. Carex nudata? on bank and bed. Perideridia kell. – few on bank. Helenium puberulum, Rhamnus californica. Cynodon,Phyla in patches on stream bed.
072	Tamarix – 2 resprouting stumps, 5-10 ft tall.
073	Tamarix – 5+ reprouting stumps. Melilotus albus, Phalaris aquatica. Lepidium – scattered. Xanthium, Phyla, Cynodon, Piptatherum, Helianthus bolanderi. Asclepias eriocarpa on bed.
Stop	About 100 yds south of mile 26.00 sign on road.
September 4, 2004	
074	Amaranthus blitoides on bed. Melilotus indicus (small patch), Euphorbia serpyllifolia, Phyla, Eremocarpus setigerus on bed. Rosa californica on bank. Heliotropium curasavicum, Hoita mac. on bed.
075	Tamarix parviflora – 7 resprouting stumps. Melilotus albus on both banks – broken to solid band, 5-15 ft wide. Rhamnus tomentella, scattered on west bank. Helianthus bolanderi (exilis) – 1 plant . Crypsis shoenoides on bed. Asclepias eriocarpa on rocky bank (36" tall). Xanthium strumariaum scattered on bed.
076	QULO, QUWI, Datsica, Artemisia douglasiana, Brickellia californica, Solidago canadensis? Clematis ligusticifolia. TODI. Piptatherum – 6-8 ft on bar. Phalaris aquatica – scattered. Centaurea solstitialis on bar. Dactylis glomerata – few on bar. Helianthus bolanderi (exilis) – few on bar. Hirshfeldia incana on bar. Xanthium, Eremocarpus, Trichostema laxum – few.
077	Lepidium latifolium – small patch, 6 ft circle on east edge of bed. QULO. Phalaris – few. Melilotus albus – in continuous to broken band 3-15 ft wide. Asclepias eriocarpa (42" tall, with heavy aphid infestation). Centaurea solstitialis – scattered on bed. Datisca, Antirrhinum vexillo-calyculatum – 1 plant on bed.

078	Tamarix – few young plants. Lepidium latifolium – patches. Populus fremontii sapling 8 ft tall. Equisetum laevigatum on bed. Brickellia – few. Asclepias eriocarpa on cobbly bed. Phyla, Cynodon – in patches 2-8 ft across. Melilotus albus – scattered. Xanthium scattered on bed. QULO, Salix (young). Brickellia – stem to 57 " long. Verbena lasiostachys – few on bed. Phalaris, Piptatherum – scattered on bed. Helianthus – 72" tall. Pool 12 x 20 ft. with 2" long fish (water brown).
079	Lepidium latifolium – patch 15 x 20 ft. in mid-stream. Melilotus albus on bar (dense). Tamarix (2). Piptatherum on bar. Asclepias eriocarpa – common on vertical NW bank.
080	Tamarix – 1 resprout. Melilotus albus – dense on SE bank w/ Piptatherum scattered. Paspalum distichum, Cynodon dactylon on bed. Scirpus pungens patchy. Populus fremontii sapling 3 ft tall. Eleocharis macrostachys (?) on bed – small patches.
081	Populus fremontii – 4 saplings 4-8 ft tall. Scirpus pungens, Salix laevigata. Melilotus albus on bar (no bank here). Xanthium, Datsica, QULO. Paspalum and Cynodon patchy on bed. Typha – patchy.
082	Pool 15 x 10 ft (water brown) – 2 Aquatic Garter Snakes observed (photo), bees, water striders (many). QULO, QUWI, TODI, Rhus trilobata, Symphoricarpus albus, Rhamnus tomentella. Xanthium, Hoita macrostachya, Datisca. Melilotus albus in broken band on west edge of stream. Helenium puberulum, Phyla on bed. Carex nudata – scattered individuals. Asclepias fascicularis.
083	Pool – mossy, 20 x 12 ft., bees collecting mud? QULO. Hoita, Glyccyrhiza. Melilotus albus in broken patches on bar. Ascelpias eriocarpa, Datisca, Stachys stricta (few). Lepidium latifolium – 40 x 15 ft patch – open.
084	Tamarix – 1 resprout (8 ft). Rosa californica. Lotus corniculatus on bed. Helianthus exilis (1). Lepidium latifolium – vegetative, 4 ft circle. Phyla, Clematis ligusticifolia.
085	Tamarix – 1 resprout (4 ft). Lepidium latifolium – 15 ft patch. Populus fremontii – 1- 10ft sapling. Phyla on bed. Melilotus albus – broken band on west bank. Helenium, Piptatherum on east bank. Crypsis, Cynodon on bed. Hoita. Carex nudata more common here. Equisetum laevigatum in patches.
086	QULO, QUWI, PISA, w? VICA, HEAR, Ceanothus oliganthus, Keckiella lemmonii, Rosa californica, Salix, Melilotus albus – broken bank on both banks, 5-15 ft wide. Datisca, Baccharis salicifolia, Xanthium, Phyla , Heliotropium, Carex nudata, Clematis ligusticifolia, Cercis occidentalis.
087	Tamarix – 3 resprouts. Lepidium – 10 patch. Brickellia, Cynodon in patches. Fraxinus latifolia I(1 tree), AECA (1), Phyla, Carex nudata. QULO/ PISA. Lotus corniculatus. Marrubium vulgare (1). Helianthus exilis. Trichostema laxum (1). Heliotropium, Crypsis on bed.
088	(poor GPS coverage, +/- 65 ft.) Tamarix – 2 resprouts (8 ft.) QULO-PISA-QUWI. Salix lasiolepis, Scirpus pungens. Phalaris scattered on bank. Piptatherum scattered. Melilotus albus – patches. Paspalum on

	bed.
089	QUDO/ PISA-QULO. Melilotus albus on bar, 15 ft. band. Scirpus pungens, Salix lasiolepis (many young volunteers). Asclepias eriocarpa on bar. Juncus mexicanus. Lepidium latifolium – vegetative plants (4ft tall). Fraxinus dipetala on west bank. Equisetum laevigatum.
090	QUDO – open. Melilotus albus in broken band on both banks. Scirpus pungens common on bed. Xanthium, Helianthus (1), Cercis (1). Eleocharis in patch. Crypsis on bed. Ailanthus ? on slope. Equisetum laevigatum in patch. Datisca, Phyla, Cynodon in small patches. Trichostema laxum (1) Polypogon, Juncus mexicanus in patches.
091	(coverage returned to +/- 30 ft.) Tamarix – 15 + resprouting plants. Lepidium 8 x15 ft. Cynodon dactylon. Meliloyus albus dense on bar. Juncus mexicanus. Phyla, Xanthium, Hoita, Heliotropium, Asclepias eriocarpa. Lotus corniculatus. Piptatherum – scattered.

Figure B.9. Locations of riparian surveys conducted at the Knoxville Wildlife Area.

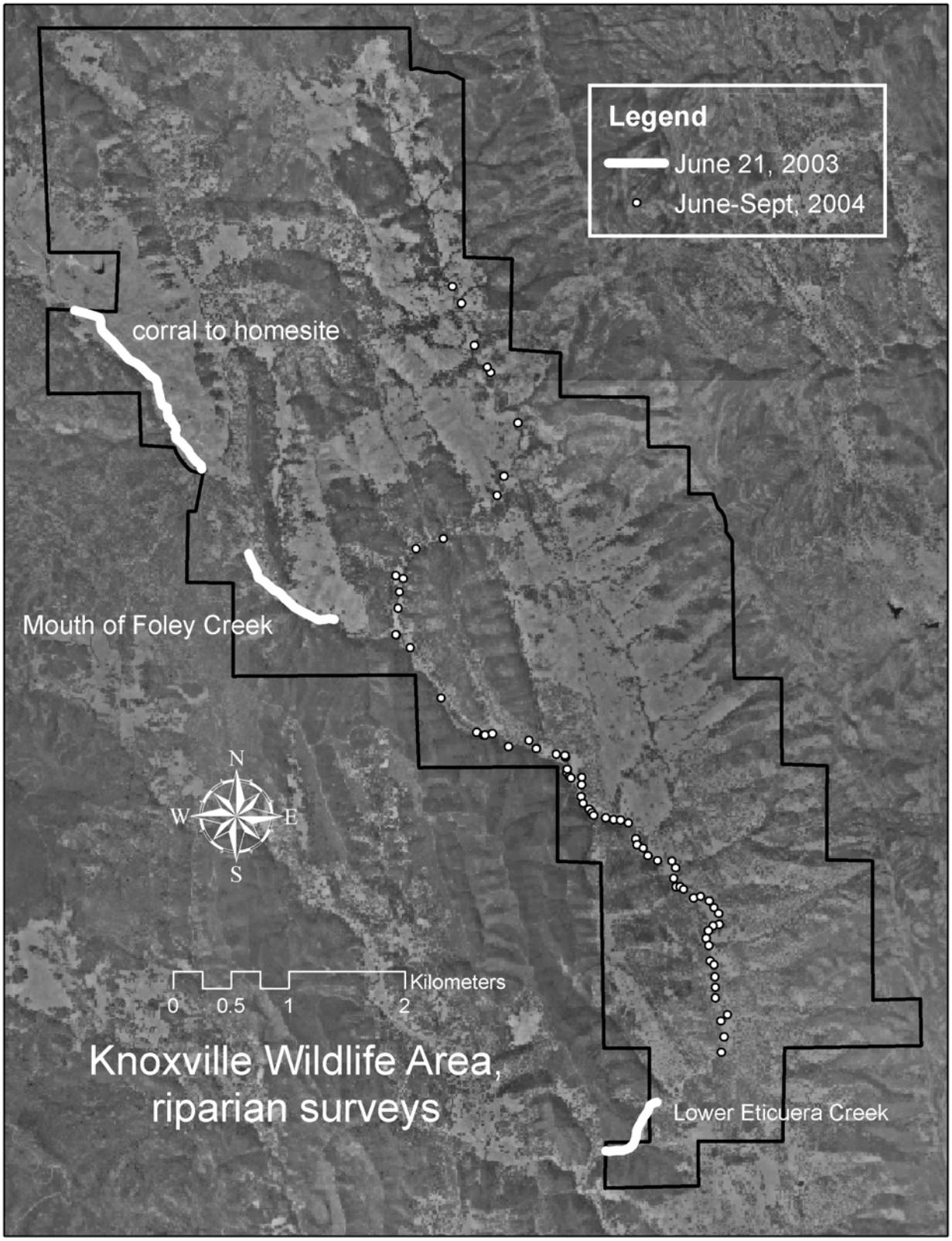


Figure B.10(A). Detail of Eticuera Creek Survey (June-Sept 2004). Numbers key to locations indicated in Table B.5.

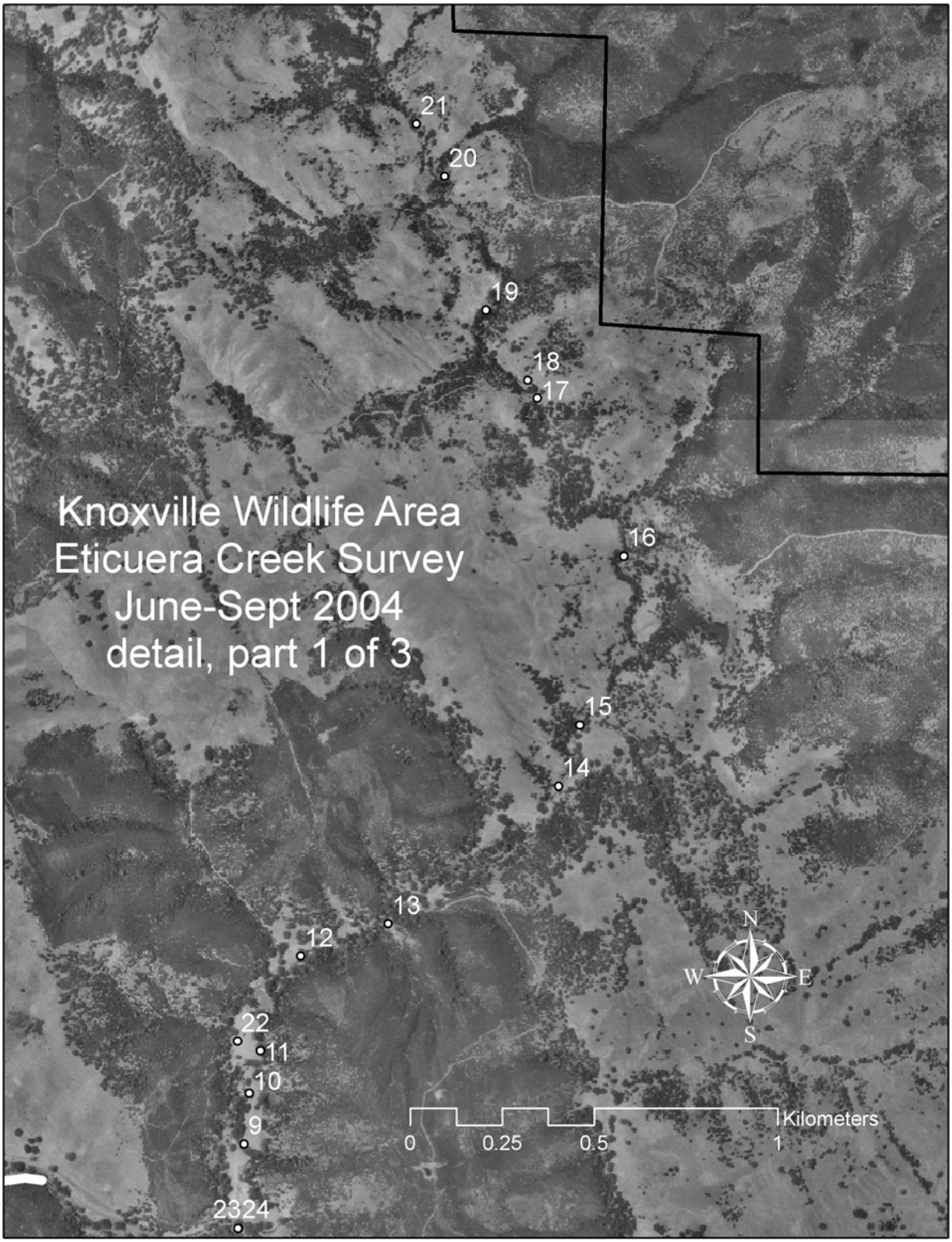


Figure B.10(B). Detail of Eticuera Creek Survey (June-Sept 2004). Numbers key to locations indicated in Table B.5.

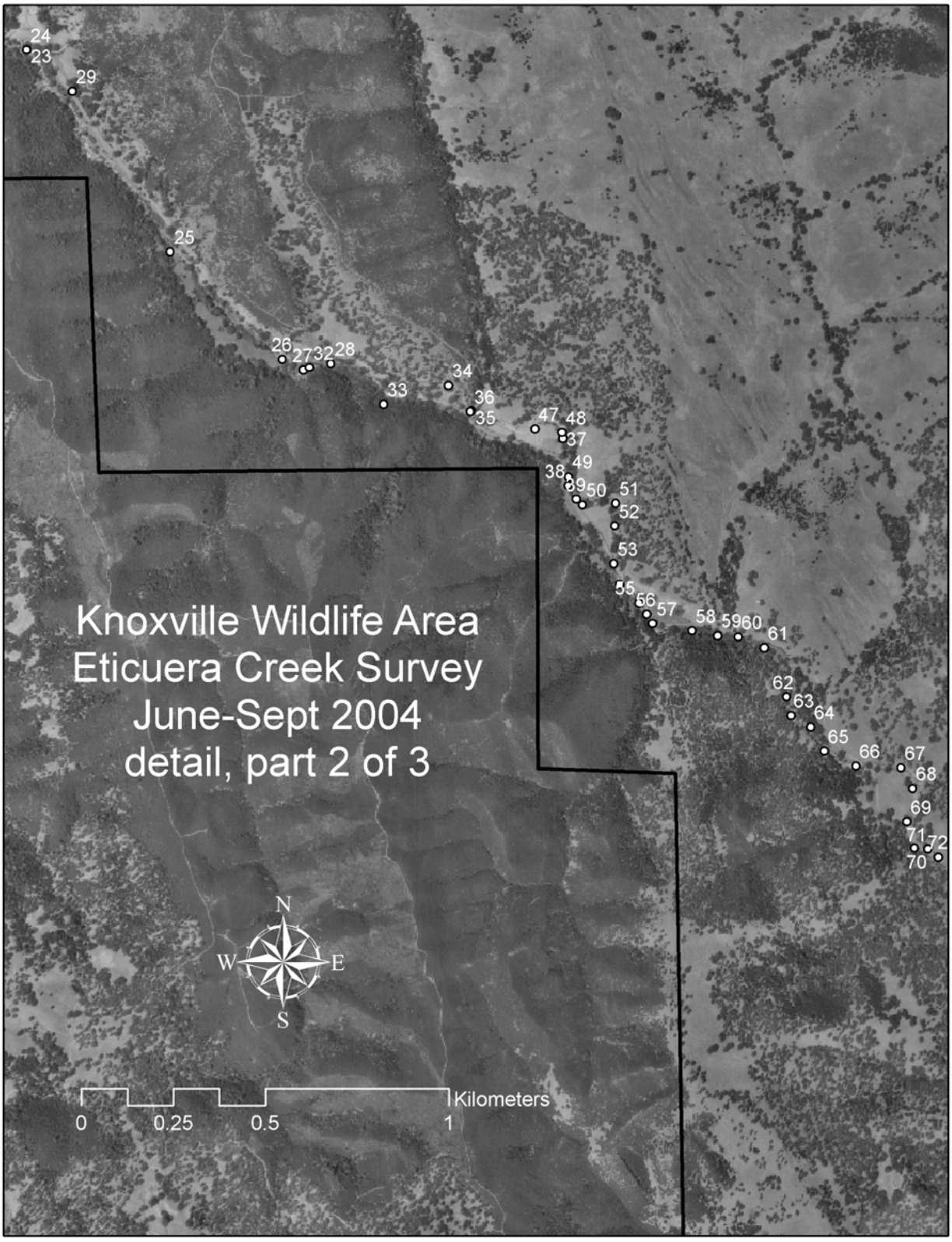
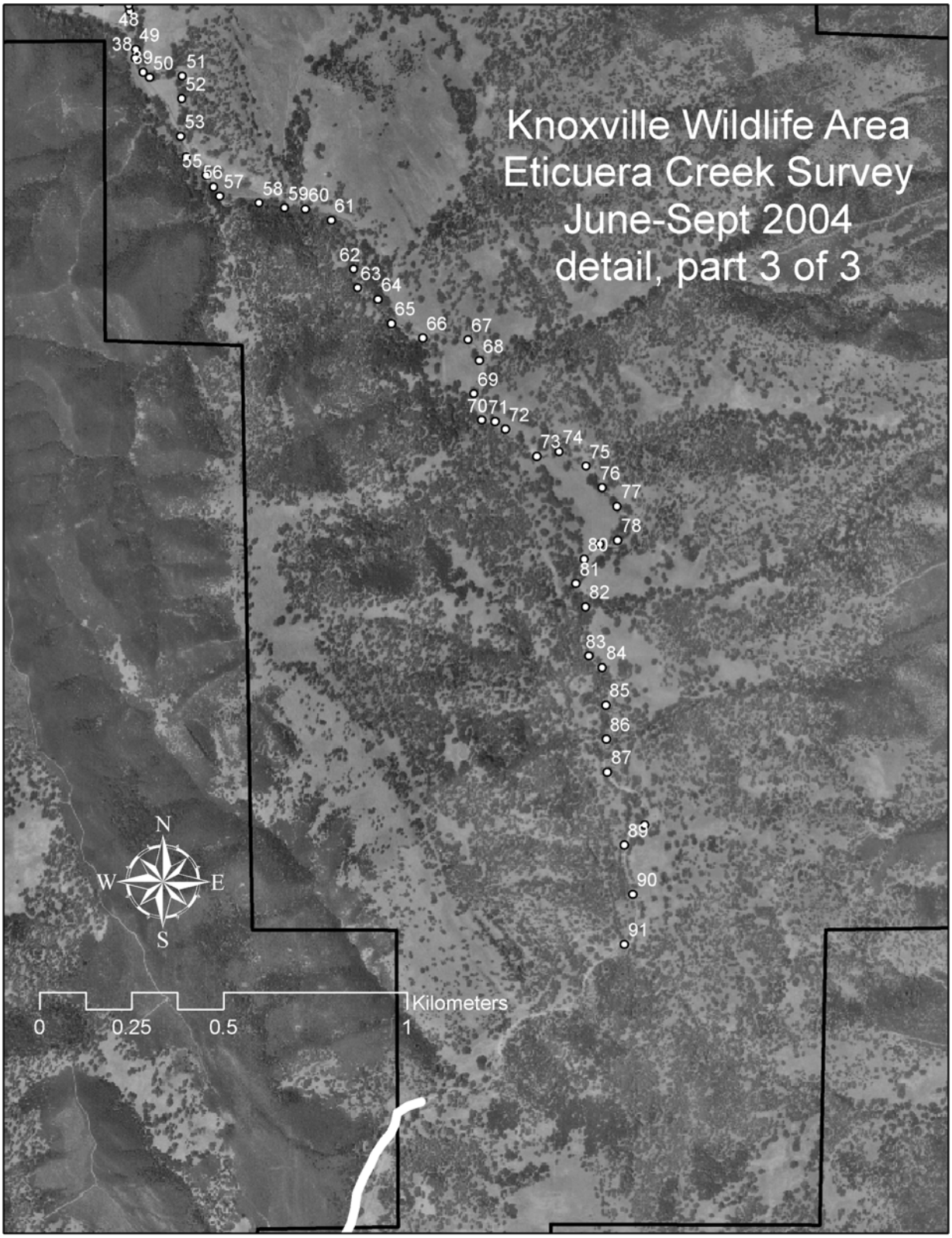


Figure B.10(C). Detail of Eticuera Creek Survey (June-Sept 2004). Numbers key to locations indicated in Table B.5.



❖ Surveys for Special Status Plants

Special Status Plants Survey Methods and Results

The KWA is an expansive property, and due to the size, ruggedness, and density of vegetation, a rare plant survey according to DFG guidelines is cost prohibitive. Therefore, the survey focused on habitat types where rare plants had previously been seen by Jake Rugyt. Thus, the ridge top of the Blue Ridge and vegetation types occurring on serpentine substrate were give special focus. The occurrence of a large fire in 2000 also facilitated greater understanding of post fire vegetation in this region particularly with regards to the distribution of *Malacothamnus helleri*, one of the special status species. Surveys focused on collecting distributional data on all California Native Plant Society special status species from those that are considered Rare & Endangered to those of limited distribution (List 4). It had also been requested by DFG management that species of local rarity receive attention. There are no known state or federally listed plants within the KWA or surrounding area.

The bulk of the KWA was surveyed by walking the many miles of jeep trails that transect the ridges and follow Foley and Long Canyon creeks. Old fire trails were utilized to access the Blue Ridge but the current condition of these required some brush bashing. Some cross-country hikes were conducted to insure visitation of plant communities occurring on the range of slope exposures. The size of the KWA also necessitated coverage of fractions of the property on a given survey date. Searches were conducted throughout the flowering season during 2003 and more periodically during 2004. Following the acquisition of ICE vegetation maps, some effort was made to verify the occurrence of Valley Oak Alliance (limited in Napa County) and to visit some vegetation types possibly not encountered during 2003 surveys, including some of the undetermined (9999) vegetation types plotted on the ICE maps. Most of the field searches were conducted alone, with assistance from Cathy Koehler, Paul Aigner and Dr. Susan Harrison in the spring of 2003. The following survey dates were utilized to complete the survey. A list of all plant species encountered during the field searches was recorded.

March 8, 21, 31; April 9, 14, 22, 26; May 5, 24; June 21; July 5 of 2003.
March 27; April 3,10; May 9; June 12, 19; July 24 of 2004.

During this time approximately 75.5 hours were spent in the field. About 4 of these hours were spent on cursory examination of three outlying parcels.

Special status plants that were found in this survey are described in Chapter III of this plan and are mapped in Figures B.11. (omitted from public copy).

Figure B.11(A). deleted from this copy

Figure B.11(B). deleted from this copy

❖ Herptile Surveys

Herptile surveys were conducted to document species presence. Primary targets were aquatic herptiles, amphibians in particular. No surveys targeted snakes or lizards. Two primary survey methods were used: road surveys and area searches.

Road Survey Methods

These surveys primarily targeted newts, but also allowed for detection of frogs and other herpetofauna that may cross the road. Because Berryessa-Knoxville Road follows and frequently crosses the course of Knoxville/Eticuerra Creek, road surveys had the potential of encountering any animals that were moving between the creek and adjacent upland habitats (primarily Blue Oak Woodland). Road surveys were conducted by automobile during rainy weather. Two people (one driver/spotter, one spotter/handler) drove slowly along Berryessa-Knoxville Road between the north and south entry points of the Knoxville Wildlife Area, sighting amphibians on the road. In the daytime, no additional light sources were used to sight animals on the road. At nighttime, vehicle headlights and spotlights were used. Each amphibian encountered was captured by hand by the handler, identified to species (unless otherwise noted), and released on that side of the road in the direction that the animal was initially traveling. A total of three road surveys were conducted, one during the day, and two at night.

Area Search Methods

These surveys were aimed primarily at finding breeding frogs. Areas likely to support breeding frogs were visited near or after dusk on nights when it was not raining. Target areas included ponds of the KWA and sections of Knoxville/Eticuerra Creek and were chosen in order to maximize likelihood of encountering Red Legged Frogs and Yellow Legged (respectively), if present. Surveyors worked in pairs. Upon arrival at a location, surveyors remained quiet and still for long enough to allow frogs to begin calling again. An auditory assessment of frog species was then conducted, following which surveyors waded around the edges of the pond or along the course of the creek and spotted animals or their eye-shine using flashlights and headlamps. Animals that were spotted were approached or captured and identified to species when possible.

Herptiles were identified to species using several methods:

- Newts were identified to species by inserting a blunt probe into the corner of the mouth, prying open the jaws, and observing the pattern and location of the palatine teeth, by assessing the location of the eyes with respect to the jaw-line in dorsal view, and by noting the skin color patterns. Information on identification methods was obtained from Brad Shaffer (UCD professor of evolution and ecology) and the Field Guide to Western Reptiles and Amphibians, Second Edition, by Robert C. Stebbins.

- Frogs were identified by call and by physical markings. Some individuals were caught for in-hand verification. Information on identification methods, calls, and habitat assessment was obtained from various websites including:
  http://ice.ucdavis.edu/CANVDecliningAmphibians/Tour.htm
  http://www.amphibiaweb.org/cgi-bin/amphib_query?special=call&genus=Rana&species=boylii
  http://www.biology.mcgill.ca/undergra/c465a/biodiver/2002/red-legged-frog/redlegged.htm
  and the Field Guide to Western Reptiles and Amphibians.

- Western Pond Turtles were identified by sight and caught for in-hand verification. Information on identification was obtained from the Field Guide to Western Reptiles and Amphibians.

Herptile Survey Results

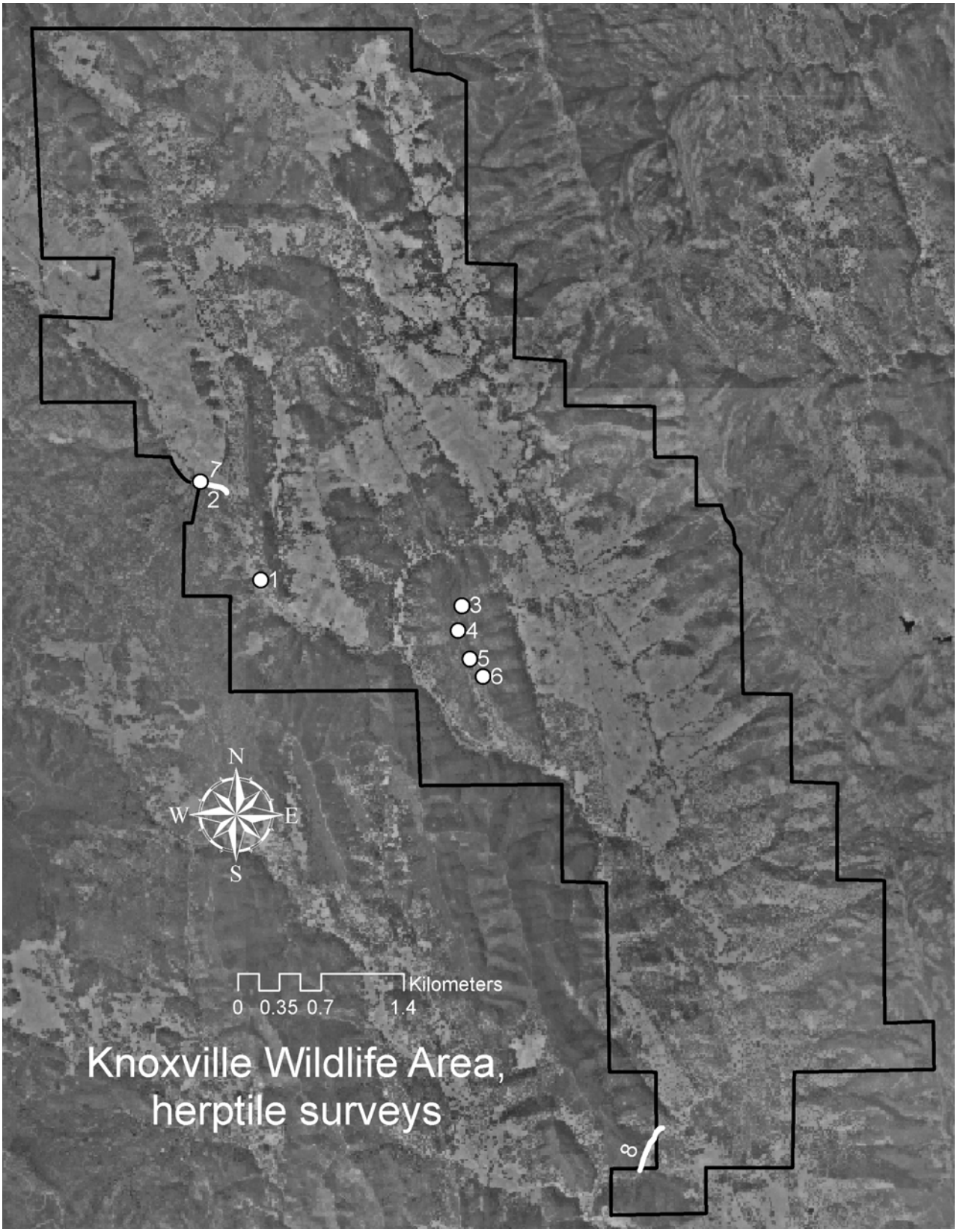
Results of herptile surveys are presented in Table B.5. This table includes incidental detections of animals that occurred outside of formal surveys. Locations for area searches and incidental detections are given in Figure B.12. Species detected include the California newt, bullfrog, foothill yellow-legged frog, pacific treefrog, and common garter snake.

Table B.5: Results of herptile surveys.

Survey Method	Date	Time	Location	Map number in Fig. B.9	Herpetofauna encountered, habitat notes when applicable
Road Survey	Dec.13 2002	1312-1350 h	Berryessa-Knoxville Rd., south cattle grate to northern corral	n.a.	11 live newts 2 freshly killed newts (species not identified, although likely California Newt)
Road Survey	28 Nov. 2003	1816-2023 h	Same as above	n.a.	California newts 28 live 23 freshly killed
Road Survey	19 Dec. 2003	2111 – 2315 h	Same as above	n.a.	California newts 87 live 10 freshly killed
Area Search	4 Feb. 2004	1800 – 2000 h	Knoxville Creek oxbow and creek bed across from oxbow	1	Pacific treefrogs (chorusing and visual ID) California newt
Area Search	4 Feb. 2004	2015 - 2035	Creek bed across from homestead ruins	2	No animals.
Incidental	23 Feb. 2004	1815 (brief visit)	Reservoir 20 in pond and reservoir inventory	3	Pacifit tree frogs chorusing. Unlikely red-legged frog habitat (no emergent vegetation; chamise surrounding pond).
Incidental		1820	Reservoir 19 in pond and reservoir inventory	4	Pacific tree frogs chorusing. Unlikely red-legged frog habitat (no emergent vegetation; chamise surrounding pond).
Incidental		1825	Reservoir 18 in pond and reservoir inventory	5	Pacific tree frogs chorusing in pond. Did not examine pond.
Area Search		1830 - 1945	Reservoir 17 in pond and reservoir inventory	6	Pacific tree frogs chorusing. No emergent vegetation in pond; surrounded by Blue Oak woodland. Visual confirmations (survey of pond shallows with headlights): 1 common garter snake 10 California newt / 1 larval newt 50 Pacific tree frogs
Area Search	14 March 2004	2000 - 2150	200 m stretch of Creek downstream of homestead ruins	7	Occasional calling pacific tree frogs encountered. 8 foothill yellow-legged frogs encountered, calling and visual (most captured for confirmation)
Area Search		2230 - 2330	200 m stretch of Creek upstream from South border Cattle Grate	8	Many calling Pacific tree frogs, 3 seen. 1 bullfrog 1 western pond turtle

					14 California newts
Incidental	Spring 2003	Midday	Oxbow and creek water crossings	1	western pond turtles (multiple sightings)

Figure B.12. Herptile survey locations referenced in Table B.5.



❖ Pond and Reservoir Inventory

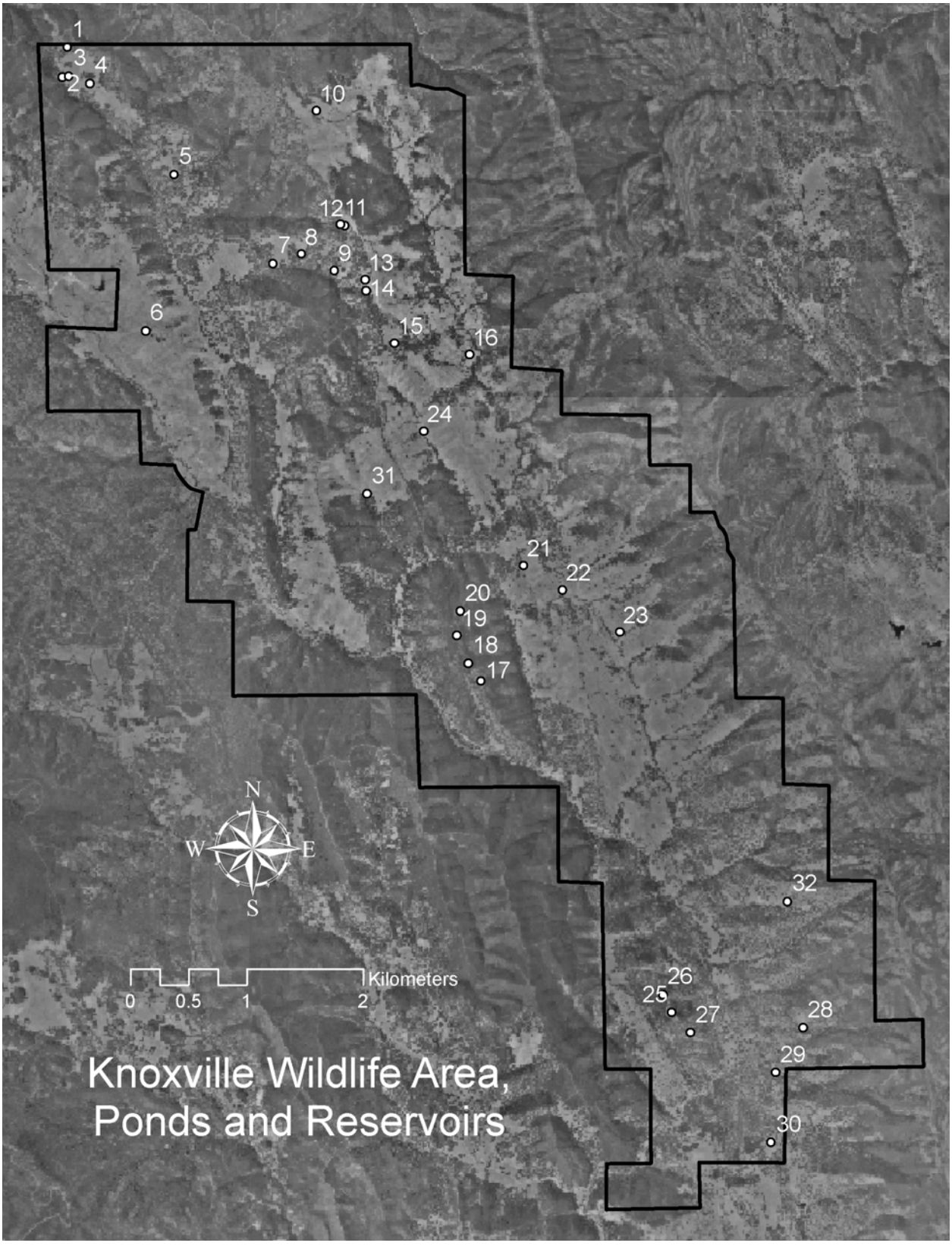
Approximately 32 reservoirs exist within the Knoxville Wildlife Area. All of these (with the possible exception of one) are man-made impoundments for stock watering. Twenty six of these reservoirs were visited (by Paul Aigner and Cathy Koehler) in 2003 and 2004. Each reservoir was photographed and notes were taken about the vegetation occurring within and around the pond, the condition of the dam, and the extent of erosion. Table B.3 summarizes these notes. Reservoirs are mapped and numbered in Figure B.10, and photographs corresponding to numbers on the map follow.

Table B.6. Characteristics of reservoirs and ponds at the Knoxville Wildlife Area.

Num.	Vegetation	Water holding	Erosion	Other comments
1	No emergent vegetation	Good, no obvious dam	None	Possibly natural
2	No emergent vegetation	Poor, dam breached	Substantial at and below dam	Harding grass and star thistle on dam.
3	Some creeping spikerush (*Eleocharis macrostachya*)	Poor, dam breached	Substantial at and below dam	Some Harding grass
4	Creeping spikerush in center	Poor, although dam is intact; dry by April	None	No star thistle or weeds other than *Bromus diandrus* and other widespread annual grasses
5	No emergent vegetation	None. Was originally a small impoundment and now dam is breached	None	
6	No emergent vegetation	Poor, dam breached	Substantial below dam	
7	Some creeping spikerush	Good, water in July	None	
8	No emergent vegetation	Poor to none, dam breached	Some below dam	
9	No emergent vegetation	Poor, dam breached	Some below dam	
10	Abundant spikerush, *Juncus* sp., small patch of cattail	Good, one of the largest ponds at the KWA	Some on dam	Abundant star thistle on and below dam. Some bull thistle below dam. Spillway has a culvert. Dam is in danger of washing out in the center
11	Some creeping spikerush	Moderate. Dam intact, but dry in July	None	This is the upper of two adjacent ponds.
12	Abundant creeping spikerush	Good. Dam intact. Contains water in July	None	This is the lower of two adjacent ponds.
13	None	Poor	Slight at spillway	
14	Some creeping spikerush	Moderate. Dam intact,	None	

		but dry in July		
15	Some creeping spikerush, *Juncus* sp.	Moderate, dam has small blow out	Some at dam	Harding grass in pond and below dam
16	No emergent vegetation. Some *Heliotropum* sp.	Poor, dam intact, but dry in July	None	Dense yellow starthistle around pond
17	None	Good	Substantial in drainage below dam	
18	Cattail around margin	Good	None	
19	Cattail around margin	Good	None	
20	None	Good	None	
21	Some creeping spikerush	Poor, dam breached	None	Reservoir #1 on the Water License
22	Pond surrounded and filled with dense cattails and creeping spikerush	Moderate. No standing water in July but muddy in the center	None	Reservoir #2 on the Water License
23	Some creeping spikerush	Poor, dam intact, dry in July	None	
24	Abundant creeping spikerush	Good, dam intact	Some at spillway	Some Harding grass around pond and on slope opposite road.
25	Not visited			Reservoir #3 on the Water License?
26	Not visited			
27	Not visited			
28	Not visited			
29	Not visited			
30	Not visited			
31	Pond viewed only from a distance	Moderate, dam breached	Substantial at and below dam	Harding grass around pond
32	None	Poor, dam intact, dry in July	None	

Figure B.13. Ponds and reservoirs at the Knoxville Wildlife Area.



Pond 1, photographed April 10, 2004.

Reservoir 2, photographed April 10, 2004.

Reservoir 3, photographed April 10, 2004. Lower photo shows erosion below dam.

Reservoir 4, photographed April 10, 2004.

Reservoir 5, photographed April 10, 2004.

Reservoir 6, photographed Dec 18, 2003. Lower photo shows erosion below dam.

Reservoir 7, Photographed April 10 (above) and July 13 (below), 2004.

Reservoir 8, photographed July 13, 2004.

Reservoir 8, breach in dam, July 13, 2004.

Reservoir 9, photographed July 13, 2004.

Reservoir 10, photographed July 13, 2004.

Reservoir 11, photographed July 13, 2004.

Reservoir 12, photographed July 13, 2004. The dam of reservoir 11 is in the background.

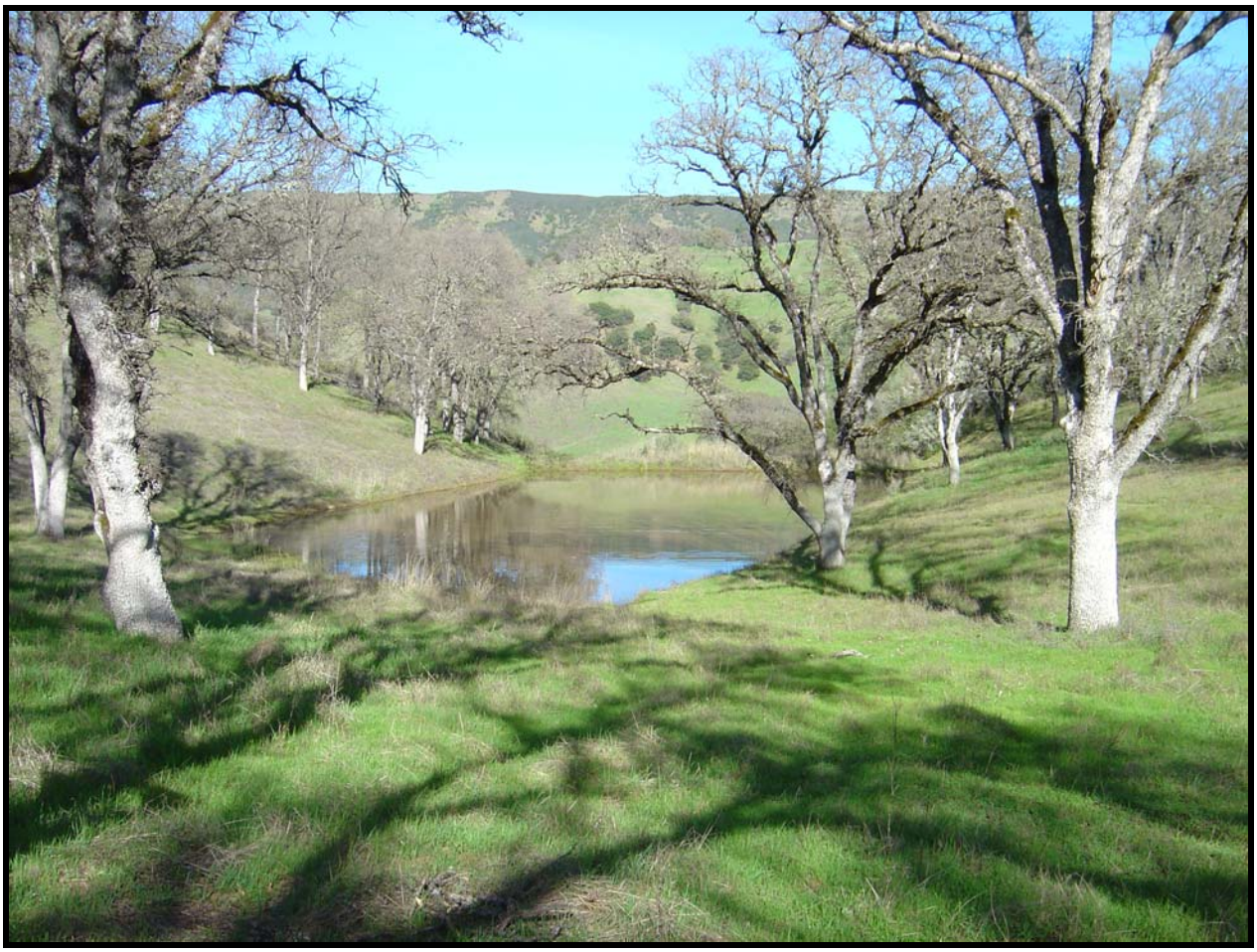
Reservoir 13, photographed July 13, 2004. Lower photo shows some erosion at dam.

Reservoir 14, photographed July 13, 2004.

Reservoir 15, photographed July 13, 2004.

Reservoir 16, photographed July 13, 2004.

Reservoir 17, photographed March 13, 2004.



Reservoir 18, photographed March 13, 2004.

Reservoir 19, photographed March 13, 2004.

Reservoir 20, photographed March 13, 2004.

Reservoir 21, photographed July 13, 2004.

Reservoir 22, photographed July 13, 2004.

Reservoir 23, photographed July 13, 2004.

Reservoir 24, photographed July 13, 2004.

Reservoir 31, photographed March 13, 2004.

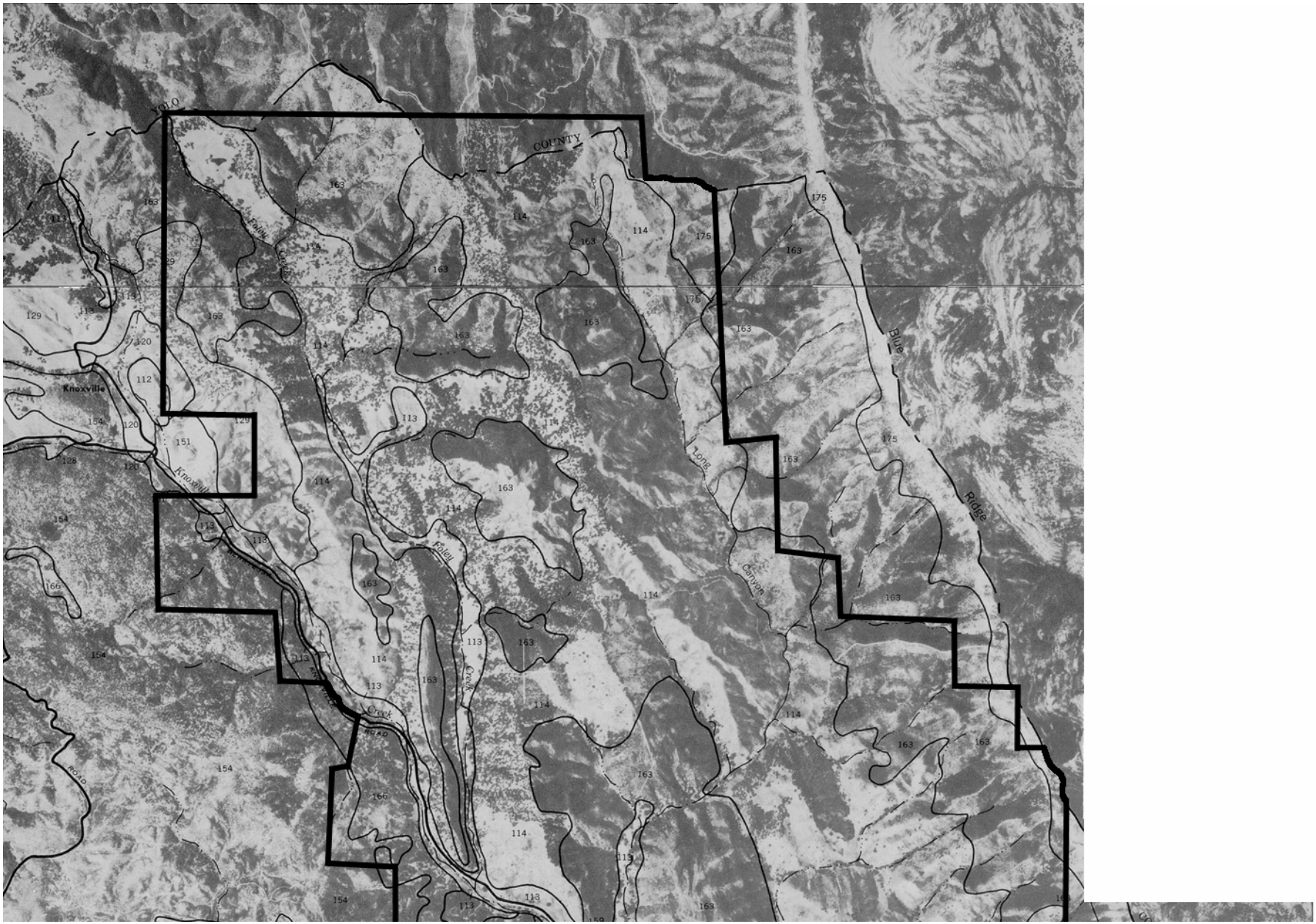
Reservoir 32, photographed July 13, 2004.

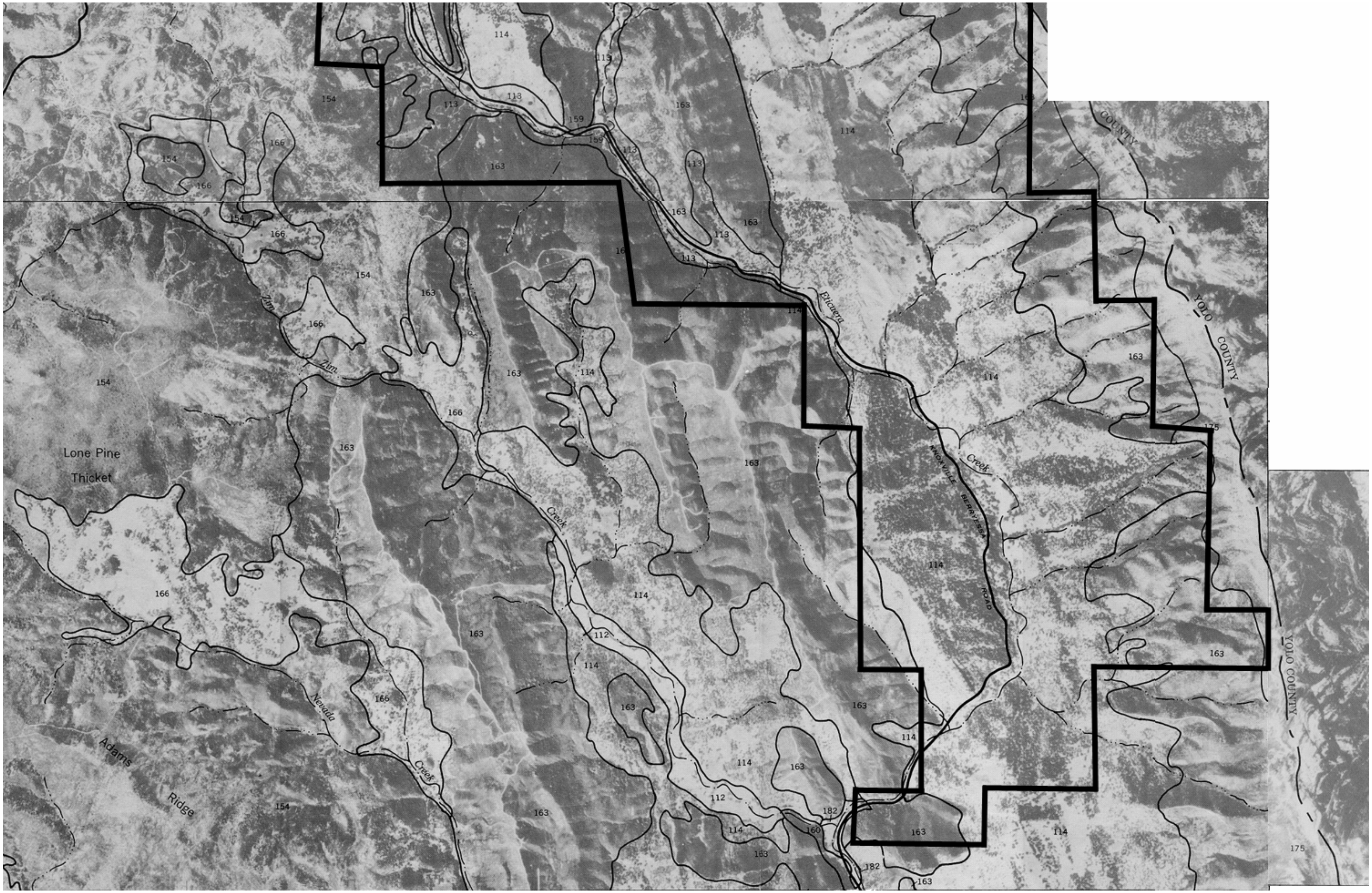
Appendix C.
USDA Soil Conservation Service Map

Soil map of the Knoxville Wildlife Area, adapted from the Soil Survey of Napa County, by G. Lambert and J. Kashiwagi, USDA Soil Conservation Service, 1978. Map units are keyed to the table below. For series descriptions, see the text of the Knoxville Wildlife Area Management Plan and http://www.ca.nrcs.usda.gov/mlra02/napa.html.

Table C.1. Key to soils mapped at the Knoxville Wildlife Area

Bressa series	
112	Bressa-Dibble complex, 5 to 15 percent slopes
113	Bressa-Dibble complex, 15 to 30 percent slopes
114	Bressa-Dibble complex, 30 to 50 percent slopes
Contra Costa series	
120	Contra Costa loam, 5 to 15 percent slopes
Diablo series	
129	Diablo clay, 30 to 50 percent slopes
Henneke series	
154	Henneke gravelly loam, 30 to 75 percent slopes
Los Gatos series	
159	Los Gatos loam, 30 to 50 percent slopes
Maymen series	
163	Maymen-Millsholm-Lodo association, 30 to 75 percent slopes
Montara series	
166	Montara clay loam, 5 to 30 percent slopes
Rock outcrop	
175	Rock outcrop
Yolo series	
182	Yolo loam, 2 to 5 percent slopes


YOLO
COUNTY
Knoxville
Blue
Ridge
Long
Canyon
Knoxville
Road
Creek
ROAD


Lone Pine
Thicket
Adams
Ridge
Nevada
Creek
Zim
Zim
Creek
Eticuera
Creek
KNOXVILLE BERRYESSA ROAD
YOLO COUNTY
YOLO COUNTY
COUNTY
114
113
154
166
163
159
112
182
160
175

Appendix D.
License for Diversion and Use of Water

HOMESTAKE MINING COMPANY

McLaughlin Mine

November 26, 2000

Mark Van Camp, Watermaster
Upper Putah Creek Watershed
2450 Alhambra Boulevard, 2nd Floor
Sacramento, CA 95817

RE: Knoxville Ranch stock ponds (1.7 acre-feet)
Application: 029482 Permit: 020500 License: 013423

Dear Mr. Van Camp,

Please be advised that ownership of the above-referenced ponds was transferred to the California Department of Fish & Game in July, 2000. As a result the water rights and reporting requirements are now the responsibility of that agency. For reference, I have attached a copy of the original license, dated June 23, 1999.

Homestake continues to hold the following water rights subject to reporting under Condition 12 of the March 10, 1995 Settlement Agreement:

Application: 028301	Permit: 019728	License: 013182
Application: 026510	Permit: 019200	License: 013183

Should you wish to contact the California Department of Fish & Game regarding this matter, I would recommend Jim Swanson. A copy of this letter is being forwarded to him for his information as well. Jim can be contacted as follows:

Jim Swanson, Wildlife Management
Department of Fish & Game, Central Coast Region
P. O. Box 47
Yountville, CA 94599
Phone (707) 944-5528

Thank you for your help in this matter. Should you have any questions or comments, please feel free to call me at 707-995-6070 ext. 274 or email me at denderlin@homestake.com.

Sincerely,

Dean A. Enderlin
Senior Environmental Engineer/Geologist

Cc: Jim Swanson, Dept. of Fish & Game

Homestake Mining Co., McLaughlin Mine
26775 Morgan Valley Road
Lower Lake, CA 95457

Telephone (707) 995-6070
FAX (707) 995-6078

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

License for Diversion and Use of Water

APPLICATION 29482
Page 1 of 5

PERMIT 20500

LICENSE 13423

THIS IS TO CERTIFY, That

Homestake Mining Company
26775 Morgan Valley Road
Lower Lake, CA 95457-9411

has made proof as of **September 4, 1996** (the date of inspection) to the satisfaction of the State Water Resources Control Board of a right to the use of the waters of **3 Unnamed Streams** in **Napa** County

tributary to **Eticuera Creek thence Lake Berryessa**

for the purpose of **Stockwatering, Wildlife Enhancement, and Fire Protection** uses

under Permit **20500** of the Board and that the right to the use of this water has been perfected in accordance with the laws of California, the Regulations of the Board and the permit terms; that the priority of this right dates from **May 1, 1989** and that the amount of water to which this right is entitled and hereby confirmed is limited to the amount actually beneficially used for the stated purposes and shall not exceed **a total of one and seven-tenths (1.7) acre-feet per annum to be collected from October 15 of each year to May 1 of the succeeding year as follows: (1) 0.4 acre-foot per annum in Reservoir No. 1, (2) 0.6 acre-foot per annum in Reservoir No. 2, and (3) 0.7 acre-foot per annum in Reservoir No. 3.**

The capacity of Reservoir No. 1 covered by this license shall not exceed 0.4 acre-foot.

The capacity of Reservoir No. 2 covered by this license shall not exceed 0.6 acre-foot.

The capacity of Reservoir No. 3 covered by this license shall not exceed 0.7 acre-foot.

After the initial filling of the reservoirs, licensee's right under this license extends only to water necessary to keep the storage reservoirs full by replacing water beneficially used and water lost by evaporation and seepage, and to refill if emptied for necessary maintenance or repair. Such right shall be exercised only during the authorized diversion season.

(0000041)

THE POINTS OF DIVERSION OF SUCH WATER ARE LOCATED:

(1) Reservoir No. 1 - North 2,250 feet and West 2,200 feet from SE corner of Section 15, T11N, R4W, MDB&M, being within NW¼ of SE¼ of said Section 15.

(2) Reservoir No. 2 - North 1,850 feet and West 1,050 feet from SE corner of Section 15, T11N, R4W, MDB&M, being within NE¼ of SE¼ of said Section 15, and

(3) Reservoir No. 3 - North 350 feet and East 1,900 feet from SW corner of Section 26, T11N, R4W, MDB&M, being within SE¼ of SW¼ of said Section 26.

A DESCRIPTION OF THE LANDS OR THE PLACE WHERE SUCH WATER IS PUT TO BENEFICIAL USE IS AS FOLLOWS:

At Reservoir No. 1 within NW¼ of SE¼ of Section 15, Reservoir No. 2 within NE¼ of SE¼ of Section 15, and Reservoir No. 3 within SE¼ of SW¼ of Section 26, all within T11N, R4W, MDB&M, as shown on map on file with State Water Resources Control Board.

Licensee shall comply with the following provisions which are derived from the Condition 12 Settlement Agreement dated March 10, 1995 (Agreement) pursuant to the Sacramento County Superior Court, Judicial Council Coordination Proceeding No. 2565:

(1) Licensee is hereby put on notice that the Sacramento County Superior Court, Judicial Council Coordination Proceeding No. 2565, has retained jurisdiction over the parties and, upon application by the watermaster, has the right to temporarily enjoin the diversion of water under this license for noncompliance with the terms of the Agreement.

(2) Diversion of water under this license shall be subject to the watermaster appointed by the court to enforce the terms of the Agreement. The licensee shall be responsible for partial payment of the watermaster costs in accordance with the terms of the Agreement.

(3) Licensee may employ existing methods or means of measurement (or alternatively any other standard means of measurement normally acceptable or satisfactory to the SWRCB in its administration of appropriative water rights) for determining the amount of water diverted to storage under this license, unless otherwise specified by the Agreement.

(4) Licensee shall install at licensee's own cost such additional or other measurement devices as are necessary to measure actual depletions, if the watermaster determines that additional measures are necessary, consistent with Section 3.A.3 (Measuring Devices) of the Agreement.

(5) Licensee shall report to the watermaster annually, on or about September 1, the amount of water diverted to storage under this license at the beginning and end of the Accumulation Season as required by the watermaster. Such annual reports shall be made in writing on forms approved by the watermaster.

(6) Licensee shall allow the watermaster reasonable access to the project covered by this license to inspect measuring equipment and to verify compliance to terms and conditions of the Agreement, upon 48-hour prior notice and upon such reasonable conditions as licensee may prescribe.

(7) Licensee is hereby put on notice that there may be years when diversion of water under this license will not be within the reservation of water established for the Putah Creek watershed upstream of Monticello Dam, as set forth in the Agreement and that in those years no water may be available under this license.

(8) In the event Allowable Depletion is exceeded in any year, licensee shall release water diverted to storage to the extent necessary to bring the Allowable Depletion into compliance. Licensee's obligation to release water from storage shall be governed by the repayment provisions of the Agreement. (Agreement pp. 9, 10, and 11)

(9) In any year in which Annual Depletion exceeds Allowable Depletion, if Lake Berryessa: (1) does not drop below 640,000 acre-feet in storage as of May 1, licensee shall have three years, starting in the next Accumulation Season, to make up or repay licensee's excess

diversions; or (2) does not reach 640,000 acre-feet of storage as of May 1, licensee shall have one year, starting in the next Accumulation Season to make up or repay licensee's excess diversions. In the event that Lake Berryessa spills at any time prior to full payback of excess depletion, licensee shall be excused from any further obligation for repayment of the overage.

(10) Licensee shall provide watermaster prior notice of any repayment. Repayment may be made either by releases from storage, curtailment of direct diversion, or by the provision of water from other sources.

(11) Licensee shall notify the watermaster of any change in ownership of land, changes in the water right, or changes in address related to the license.

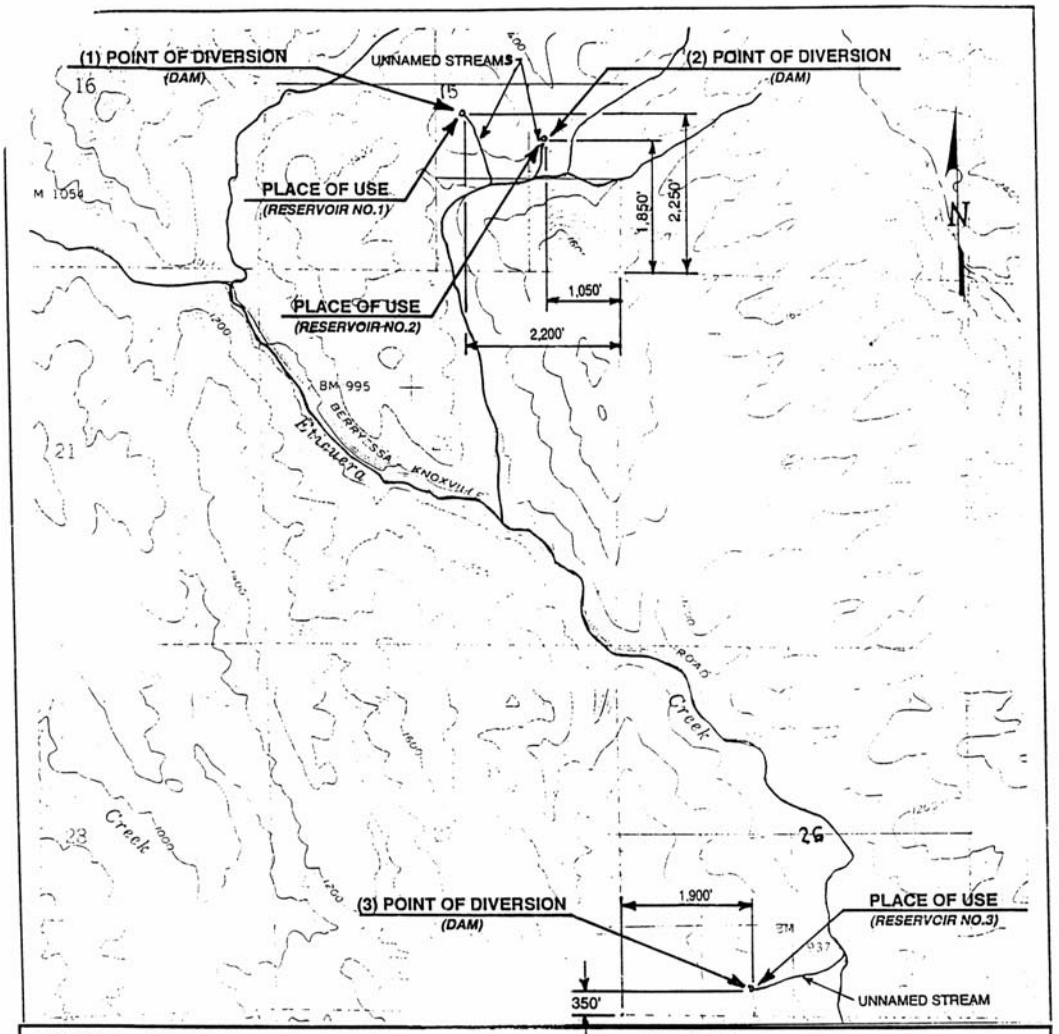
(12) Licensee is hereby put on notice of licensee's right, upon reasonable prior notice, to inspect and to copy, at licensee's own expense, all records and reports of the watermaster.

Inclusion in the license of certain provisions of this Agreement shall not be construed as disapproval of other provisions of the Agreement or as affecting the enforceability, as between the parties, of such other provisions insofar as they are not inconsistent with the terms of this license.

(0000024)

The State Water Resources Control Board (SWRCB) shall have continuing authority under Article X, Section 2 of the California Constitution, Water Code Sections 100 and 275, and the common law public trust doctrine over this license to delete, revise, amend, or adopt new terms or conditions to: (1) implement the March 10, 1995 Condition 12 Settlement Agreement and any amendments to the agreement and (2) make the terms or conditions consistent with any order of the superior court. No action shall be taken pursuant to this paragraph unless the SWRCB provides notice to affected parties and provides an opportunity for a hearing.

(0000012)



LICENSEE HOMESTAKE MINING COMPANY

SOURCE 3 UNNAMED STREAMS

POINTS OF DIVERSION

WITHIN NW/NE/SE 1/4 SE/SE/SW 1/4 OF

SECTIONS 15/15/26 ,T 11N ,R 4W , MD B&M

COUNTY OF NAPA

KNOXVILLE (U.S.G.S. QUAD) 1958 (DATE) 1:24,000 (SCALE)

PERMIT NO. 20500

APPLICATION NO. 29482

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

LICENSE

13423

DATE: 6-11-98 | DRAWN: D.L.O. | CHECKED: SM

Appendix E.
Vascular Flora of the Knoxville Wildlife Area

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common Name	MCV Vegetation Type(s) and map codes								
		Int. live oak - blue oak 1202	Int. live oak 1222	Mixed oak 1223	Valley oak riparian 3101	Blue oak 3122	Annual grass-lands 7120 7130	East county chap-arral 4301	Ser-pentine chap-arral 4303 4304 4305 4306	Other
Ferns & Allies										
Adiantum jordani	maidenhair fern	X								
Aspidotis californica	California lace fern							X		
Aspidotis densa	Indian's dream								X	
Cheilanthes covillei	Coville's lip fern							X		
Dryopteris arguta	Califoria wood fern	X								
Equisetum laevigatum	Braun's scouring rush				X					
Pentagramma triangularis	goldenback fern							X		
Pellaea andromedefolia	coffee fern					X				
Pellaea mucronata	bird's foot fern							X		
Conifers										
Cupressus macnabiana	McNab cypress							X		
Pinus sabiniana	gray pine	X	X			X				
Dicots										
ANACARDIACEAE										
Rhus trilobata	squaw bush				X					
Toxicodendron diversilobum	poison oak		X		X			X		
APIACEAE										
Angelica californica	California angelica							X		
Angelica tomentosa	coast range angelica				X					
Daucus carota *	Queen Anne's lace						X			
Daucus pusillus	rattlesnake weed							X		

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
Lomatium californicum	California lomatium					X				
Lomatium dasycarpum var. *dasycarpum*	woolly-fruited lomatium								X	
Lomatium hooveri	Hoover's lomatium						X			X
Lomatium macrocarpum	large-fruited lomatium							X		
Lomatium marginatum var. *purpureum*	Hartweg's lomatium								X	
Lomatium utriculatum	foothill lomatium					X				
Perideridia kelloggii	Kellogg's yampah									X
Sanicula bipinnata	poison sanicle					X				
Sanicula bipinnatifida	purple sanicle					X				
Sanicula crassicaulis	Pacific snakeroot					X				
Sanicula tuberosa	tuberous sanicle							X		
Scandix pectin-veneris *	Spanish needles						X			
Torilis arvensis *	common hedge parsley					X?				
Torilis nodosa *	notted hedge parsley					X?				
APOCYNACEAE										
Apocynum cannabinum	Indian hemp				X					
ASCLEPIADACEAE										
Asclepias eriocarpa	kotolo				X	X				
Asclepias fascicularis	narrow-leaved milkweed				X					
ASTERACEAE										
Achillea millefolium	common yarrow		X					X		
Achyrachaena mollis	blow wives						X			
Agoseris grandiflora	large-flowered agoseris							X		
Agoseris heterophylla	ann. mountain dandelion								X	
Ancistrocarphus filagineus	wolly fish-hooks							X		
Anthemis cotula *	mayweed							X		
Artemisia douglasiana	Douglas' mugwort				X					
Aster radulinus	rough aster							X		

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
Baccharis salicifolia	mule fat				X					
Brickellia californica	California brickellia				X					
Calycadenia pauciflora	few-flowered calycadenia								X	
Carduus pycnocephalus *	Italian thistle					X				
Centaurea melitensis *	Malto starthistle							X ?		
Centaurea solstitialis *	yellow starthistle					X				
Chaenactis glabriuscula var. *heterocarpha*	slender chaenactis							X		
Chamomilla suaveolens *	pineapple weed						X			
Cichorium intybus *	chicory						X			
Cirsium cymosum	peregrine thistle							X		
Cirsium douglasii var. *breweri*	Indian thistle							X		
Cirsium occidentale var. *venustum*	red thistle							X		
Cirsium vulgare *	bull thistle				X					
Erigeron sp.	rock daisy							X ?		
Eriophylum lanatum var. *achillaeoides*	woolly sunflower							X		
Filago californica	California filago							X		
Filago gallica	narrow-leaved filago						X			
Gnaphalium californicum	California cudweed				X					
Gnaphalium stramineum	cotton batting plant				X					
Grindelia camporum var. *camporum*	great valley gumplant						X ?			
Helenium bigelovii	Bigelow's sneezeweed								X	
Helenium puberulum	common sneezeweed					X				
Helianthella californica	California helianthella							X		
Helianthus bolanderi	Bolander's sunflower							X		
Helianthus gracilentus	slender sunflower								X	
Hemizonia congesta ssp. *luzulifolia*	hayfield tarweed									X
Hesperevax sparsiflora	erect hesperevax							X		
Holocarpha virgata ssp. *virgata*	virgate tarweed						X			
Hypochaeris glabra *	smooth cat's ear					X				
Hypochaeris radicata *	hairy cat's ear					X				
Lactuca serriola *	prickly lettuce	X								

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
Lagophylla ramosissima ssp. *congesta*	common hareleaf		X							
Lagophylla minor	lesser hareleaf								X	
Lasthenia californica	California goldfields							X		
Layia chrysanthemoides	smooth layia						X			
Lessingia ramulosa	Sonoma lessingia								X	
Madia exigua	small tarweed							X		
Madia gracilis	slender tarweed					X ?		X ?		
Malacothrix floccifera	woolly malacothrix	X?								
Micropus californicus var. *californicus*	slender cottonweed								X	
Microseris douglasii ssp. *douglasii*	Douglas' microseris					X				
Microseris sylvatica	sylvan microseris						X			
Senecio aronicoides	California butterweed						X			
Senecio clevelandii var. *clevelandii*	Cleveland's butterweed								X	
Senecio vulgaris *	common grounsel							X		X
Solidago californica	California goldenrod							X		
Taraxacum officinale *	common dandelion							X		
Uropappus lindleyi	silver puffs							X		
Xanthium strumarium	cocklebur							X		
Wyethia angustifolia	narrow-leaved mule ears						X			
Wyethia helenoides	gray mule-ears		X							
BORAGINACEAE										
Amsinckia menziesii ssp. intermedia	common fiddleneck						X			
Amsinckia menziesii ssp. menziesii	common fiddleneck					X				
Cryptantha flaccida	flaccid cryptantha							X		
Cryptantha hispidula	Napa cryptantha							X		
Cryptantha microstachys ?	Tejon cryptantha							X		
Cynoglossum grande	grand hound's tongue							X		
Heliotropium curassavicum	seaside heliotrope		X							
Pectocarya pusilla	dwarf pectocarya					X				
Plagiobothrys bracteatus ?	bracted popcornflower									X
Plagiobothrys fulvus	fulvous popcornflower									X

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
Plagiobothrys nothofulvus	rusty popcornflower				X					
Plagiobothrys tenellus	slender popcornflower							X		
BRASSICACEAE										
Arabis modesta	modest rock cress							X		
Athysanus pusillus	dwarf athysanus						X?			
Brassica nigra *	black mustard						X			
Cardamine californica var. *sinuata*	California milkmaids							X		
Hirshfeldia incana	Mediterranean mustard						X			
Lepidium latifolium *	Perennial pepperweed				X					
Lepidium strictum	wayside peppergrass						X			
Raphanus sativus *	wild radish						X			
Sisymbrium officinale *	hedge mustard						X			
Streptanthus breweri ssp. *breweri*	Brewer's jewelflower								X	
Streptanthus breweri ssp. *hesperidis*	green jewelflower								X	
Streptanthus glandulosus ssp. *glandulosos*	common jewelflower							X		
Thlaspi arvense *							X?			
Thysanocarpus curvipes	lace pod				X			X		
CALLITRICHACEAE										
Callitriche marginata	California water starwort					X				
CALYCANTHACEAE										
Calycanthus occidentalis	spice bush				X					
CAPRIFOLIACEAE										
Lonicera interrupta	chaparral honeysuckle							X		
Sambucus mexicana	blue elderberry				X					
Symphoricarpos albus var. *laevigatus*	common snowberry				X					

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
CARYOPHYLLACEAE										
Cerastium glomeratum	mouse-ear chickweed *				X					
Petrorhagia prolifera	wild carnation *					X?				
Spergularia rubra	purple sand spurry *						X			
Stellaria media	common chickweed *				X					
Stellaria nitens	shiny chickweed							X		
CISTACEAE										
Helianthemum scoparium	common rush rose							X		
CONVOLVULACEAE										
Calystegia collina ssp. collina	serpentine morning-glory							X		
Calystegia o. ssp. occidentalis	western morning-glory		X							
Calystegia subacaulis ?	hill morning-glory							X		
Convolvulus arvensis	field bindweed *						X			
CORNACEAE										
Cornus glabrata	brown dogwood				X					
CRASSULACEAE										
Dudleya cymosa	Dudley's live-forever							X		
CUCURBITACEAE										
Marah fabaceus	California manroot				X					
Marah watsonii	taw manroot		X		X					
CUSCUTACEAE										
Cuscuta sp.	dodder								X	
DATISCACEAE										
Datisca glomerata	durango root				X	X				

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
ERICACEAE										
Arbutus menziesii	madrone	X?								
Arctostaphylos manzanita	common manzanita							X		
Arctostaphylos viscida ssp. *pulchella*	white-leaf manzanita								X	
EUPHORBIACEAE										
Chamaesyce s. ssp. *serpyllifolia*	thyme-leaved spurge				X?					
Eremocarpus setigeris	turkey mullein				X?	X				
Euphorbia crenulata	Chinese caps								X	
Euphorbia spathulata	reticulate-seeded spurge							X?		
FABACEAE										
Astragalus clevelandii	Cleveland's milkvetch									X
Astragalus gambelianus	Gambel's dwarf locoweed							X		
Cercis occidentalis	western redbud							X		
Glycyrrhiza lepidota	American licorice				X					
Hoita macrostachya	leather root				X					X
Lathyrus vesititus var. *vestitus*	hillside pea		X			X				
Lotus corniculatus *	bird's foot trefoil				X					
Lotus grandiflorus var. *grandiflorus*	grand lotus							X		
Lotus purshianus var. *purshianus*	Spanish trefoil				X?					
Lotus scoparius var. *scoparius*	common deerweed							X		
Lotus wrangelianus	Chilean trefoil							X?		
Lupinus albifrons ssp. *albifrons*	silver lupine		X							
Lupinus bicolor	miniature lupine					X				
Lupinus microcarpus ssp. *aureus*	gold-whorl lupine						X			
Lupinus microcarpus ssp. *densiflorus*	white-whorl lupine								X	
Lupinus formosus var. *formosus*	summer lupine						X			
Lupinus latifolius var. *latifolius*	broad-leaf lupine		X							
Lupinus nanus	Douglas's lupine							X		
Lupinus succulentus	arroyo lupine						X			
Medicago Arabica *	spoted medic					X				
Medicago polymerha *	bur clover						X			

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
Medicago sativa *	alfalfa					X				
Melilotus albus *	white sweet clover				X					
Melilotus indicus *	yellow sweet clover				X					
Robinia pseudo-acacia *	black locust				X					
Thermopsis m. var. *macrophylla*	false lupine						X	X		
Trifolium albopurpureum var. *albopurpureum*	common Indian clover							X		
Trifolium bifidum var. *bifidum*	notch-leaved clover					X?				
Trifolium bifidum var. *decipiens*	notch-leaved clover					X				
Trifolium ciliolatum	tree clover					X?				
Trifolium depauperatum var. *amplectans*	pale sack clover						X			
Trifolium dubium *	shamrock						X			
Trifolium fragiferum *	strawberry clover				X					
Trifolium fucatum	bull clover									X
Trifolium hirtum *	rose clover					X				
Trifolium microcephalum	maiden clover							X		
Trifolium microdon	thimble clover					X				
Trifolium obtusiflorum	creek clover									X
Trifolium subterraneum *	sub clover						X			
Trifolioum wildenovii	tomcat clover							X		
Vicia Americana	American vetch				X	X				
Vicia sativa var. *nigra* *	common vetch					X				
Vicia sativa var. *sativa* *	spring vetch									
Vicia villosa var. *varia* *	woolly-podded vetch						X			
FAGACEAE										
Quercus agrifolia var. agrifolia	coast live oak	X	X		X					
Quercus berberidifolia	scrub oak	X						X		
Quercus douglasii	blue oak	X			X	X				
Quercus durata	leather oak								X	
Quercus lobata	valley oak				X					
Quercus wislizenii var. *wislizenii*	interior live oak	X	X		X					

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
Quercus kelloggii X *wislizenii*	oracle oak				X					
Quercus berberidifolia X *douglasii ?*		X								
GARRYACEAE										
Garrya congdonii	Congdon's silk tassel								X	
GENTIANACEAE										
Centaurium muehlenbergii	canchalagua				X					
Centaurium trichanthum	alkali centaury								X	
GERANIACEAE										
Erodium botrys *	long-beaked filaree					X		X		
Erodium brachycarpum *	obtuse filaree							X		
Erodium cicutarium *	redstem filaree					X		X		
Erodium moschatum *	whitestem filaree	X?								
Geranium dissectum *	cut-leaf geranium					X				
Geranium molle *	dove's foot geranium	X				X				
GROSSULARIACEAE										
Ribes malvaceum var. *malvaceum*	chaparral currant							X		
HIPPOCASTANACEAE										
Aesculus californicus	buckeye	X	X		X			X		
HYDROPHYLLACEAE										
Eriodictyon californicum	yerba santa							X		
Nemophila heterophylla	woodland nemophila		X							
Nemophila menziesii var. *menziesii*	baby blue-eyes						X			
Nemophila pedunculata	meadow nemophila							X		
Phacelia imbricata ssp. *imbricata*	imbricate phacelia		X							

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
HYPERICACEAE										
Hypericum concinnum	gold wire							X		
LAMIACEAE										
Lamium amplexicaule *	henbit						X			
Lepechinia calycina	pitcher sage							X		
Marrubium vulgare *	horehound						X			
Monardella villosa var. *villosa*	coyote mint		X							
Monardella villosa var. ?				X						
Monardella viridis var. *viridis*	green coyote mint							X		
Salvia columbariae	chia							X		
Scutellaria siphocampyloides	Austin's skullcap				X				X	
Scutellaria tuberosa	Danie's skullcap	X						X		
Stachys ajugoides var. *rigida*	rigid hedge nettle				X					
Stachys albens	woolly hedge nettle				X					
Stachys stricta	Sonoma hedge nettle				X					
Trichostema laxum	turpentine weed				X				X	
LAURACEAE										
Umbellularia californica	California bay	X	X		X			X		
LIMNANTHACEAE										
Limnanthes douglasii var. *nivea*	Douglas's meadowfoam						X			
LINACEAE										
Hesperolinon disjuctum	disjunct dwarf flax								X	
LYTHRACEAE										
Lythrum hyssopifolia *	hyssop-leaved loosestrife									
MALVACEAE										
Malacothamnus helleri	Heller's bush mallow	X						X	X	
Malva parviflora *	cheese-weed						X			

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
Sidalcea diploscypha	fringed checkermallow									X
Sidalcea hartwegii	Hartweg's checkermallow							X		
Sidalcea sp.								X		
OLEACEAE										
Fraxinus dipetala	flowering ash				X			X		
Fraxinus latifolia	Oregon Ash				X					
ONAGRACEAE										
Clarkia concinna	red ribbons								X	
Clarkia purpurea var. *quadrivulnera*	wine-cup clarkia					X				
Clarkia unguiculata	elegant clarkia	X								
Epilobium brachycarpum	panicled willow herb						X			
Epilobium ciliatum ssp. cilatum	northern willow herb				X					
Epilobium minutum	minute willow herb								X	
Zauschneria californica	California fuchsia					X				
OROBANCHACEAE										
Orobanche uniflora	naked broomrape	X								
PAPAVERACEAE										
Dicentra chrysantha	golden ears drops							X		
Eschscholzia californica	California poppy						X			
Eschscholzia caespitosa	tufted poppy							X		
PLANTAGINACEAE										
Plantago erecta	dwarf plantain					X				
Plantago truncate * ?						X				
POLEMONIACEAE										
Allophyllum gilioides	straggling gilia							X		
Collomia diversifolia	serpentine collomia								X	
Gilia achillaefolia ssp. *multicaulis*	California gilia					X				

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
Gilia clivorum ?	many-stemmed gilia					X				
Gilia tricolor	bird's eye gilia					X?				
Linanthus androsaceus	showy linanthus					X				
Linanthus bicolor	baby stars						X			
Linanthus bolanderi	Baker's linanthus							X		
Linanthus dichotomus	evening snow							X		
Linanthus parviflorus	common linanthus							X		
Linanthus pygmaeus ssp. *continentalis*	pygmy linanthus							X		
Navarretia jepsonii	Jepson's navarretia					X				
Navarretia mellita	honey-scented navarretia				X					
Navarretia pubescens	downy navarretia					X		X		
Phlox gracilis	slender phlox							X		
POLYGONACEAE										
Eriogonum luteolum var. *luteolum*	wicker buckwheat							X		
Eriogonum nudum var. *nudum*	nudestem buckwheat							X		
Eriogonum umbellatum var. *furcosum*?	sulphur buckwheat							X		
Pterostegia drymarioides	valentine plant							X		
Rumex crispus *	curly dock ?				X					
PORTULACACEAE										
Calandrinia ciliata	red maids					X				
Claytonia exigua ssp. *exigua*	dwarf miner's lettuce							X		
Claytonia parviflora ssp *parviflora*	small miner's lettuce							X		
Claytonia perfoliata ssp. *perfoliata*	common miner's lettuce				X	X				
Lewisia rediviva	bitterroot							X		
Montia fontana	water montia				X?					
PRIMULACEAE										
Anagallis arvensis *	scarlet pimpernel				X?					
Dodecatheon hendersonii	Henderson's shooting star							X		

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
RANUNCULACEAE										
Aquilegia eximia	Van Houte's columbine								X	
Clematis lasiantha	chaparral virgin's bower		X					X		
Clematis ligusticifolia	western virgin's bower				X					
Delphinium c. var. *californicum ?*	California larkspur							X		
Delphinium hesperium ssp. *pallescens*	pale western larkspur						X			
Delphinium nudicaule	red larkspur					X				
Delphinium patens ssp. *patens*	Indian blue larkspur		X ?							
Delphinium uliginosum	swamp larkspur				X			X		
Delphinium variegatum	royal larkspur					X				
Ranunculus aquatilis var. *capillaceus*	water buttercup									X
Ranunculus occidentalis	western buttercup					X				
Ranunculus hebecarpus	hairy-fruited buttercup				X					
Ranunculus muricatus *	prickly buttercup					X				
RHAMNACEAE										
Ceanothus cuneatus var. *cuneatus*	buckbrush							X		
Ceanothus jepsonii var. *albiflorus*	white-flowered musk brush							X		
Ceanothus oliganthus var. *sorediatus*	Jim-brush				X			X		
Rhamnus californica	California coffeeberry				X					
Rhamnus illicifolia	holly-leaved redberry				X					
Rhamnus tomentella ssp. *tomentella*	serpentine coffeeberry			X	X			X		
ROSACEAE										
Adenostoma fasciculatum	chamise							X	X	
Cercocarpus betuloides var. *betuloides*	mountain mahogany		X					X		
Heteromeles arbutifolia	toyon	X						X		
Horkelia californica ssp. *dissita*	tall horkelia									X
Oemleria cerasiformis	oso berry	X								
Potentilla glandulosa ssp. *glandulosa*	sticky cinquefoil				X					

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
Prunus subcordata	Sierra plum				X					
Rosa californica	California rose				X					
Rubus ursinus	California blackberry				X					
RUBIACEAE										
Galium andrewsii ssp. *andrewsii*	phlox-leaved bedstraw							X	X	
Galium aparine	cleavers							X		
Galium bolanderi	Bolander's bedstraw							X		
Galium porrigens var. *tenue*	climbing bedstraw					X				
Sherardia arvensis *	field madder					X				
SALICACEAE										
Populus fremontii ssp. *fremontii*	Fremont cottonwood				X					
Salix breweri	Brewer's willow				X					
Salix exigua	sandbar willow				X					
Salix laevigata	red willow				X					
Salix lasiolepis	arroyo willow				X					
SAXIFRAGACEAE										
Lithophragma affine	woodland star				X					
Lithophragma heterophyllum	hill star				X					
Saxifraga californica	California saxifrage				X			X		
SCROPHULARIACEAE										
Antirrhinum cornutum	spurred snapdragon									X
Antirrhinum v. var. *vexillo-calyculatum*	wirey snapdragon				X			X		
Bellardia trixago *	bellardia					X				
Castilleja affinis ssp.*affinis*	coast paintbrush	X?								
Castilleja applegatei ssp. *martinii*	round-lobed Indian paintbr.							X		
Castilleja attenuata	valley tassels							X		

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
Castilleja foliolosa	felt paintbrush							X		
Castilleja spiralis	serpentine Indian paintbr.									X
Collinsia greenei	Greene's blue-eyed Mary									X
Collinsia heterophylla	Chinese houses			X						
Collinsia sparsiflora var. *collina*	tiny blue-eyed Mary	X?								
Collinsia sparsiflora var. *sparsiflora*	blue-eyed Mary							X		
Keckiella breviflorus var. *glabrisepalus*	gaping keckiella		X							
Keckiella lemmonii	bush beard tongue				X					
Mimulus aurantiacus	sticky monkeyflower				X			X		
Mimulus cardinalis	scarlet monkeyflower				X					
Mimulus douglasii	Douglas's monkeyflower							X		
Mimulus guttatus	seep-spring monkeyflower				X					
Mimulus kelloggii	Kellogg's monkeyflower							X		
Mimulus nudatus	bare monkeyflower							X		
Pedicularis densiflora	Indian warrior		X							
Penstemon h. var. *heterophyllus*	foothill penstemon								X	
Scrophularia californica ssp. *californica*	California figwort				X					
Triphysaria eriantha	butter and eggs						X			
Triphysaria pusilla	dwarf owl clover					X				
Triphysaria versicolor var. *faucibarbata*	smooth owl clover					X				
SIMAROUBACEAE										
Ailanthus altissima *	tree-of-heaven				X					
SOLANACEAE										
Nicotiana quadrivalvis	Indian tobacco				X					
Solanum parishii	Parish's nightshade							X		
STERCULIACEAE										
Fremontodendron c. ssp. *californicum*	flannel bush							X		

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
TAMARICACEAE										
Tamarix parviflora *	small-flowered tamarisk				X					
VALERIANACEAE										
Plectritis ciliosa ssp. *ciliosa*	long-spurred plectritis							X		
Plectritis congesta	pink plectritis					X?				
Plectritis macrocera	white plectritis							X		
VERBENACEAE										
Phyla nodiflora var. *rosea* *	garden lippia				X					
Verbena lasiostachys var. ?	western verbena								X	
VIOLACEAE										
Viola douglasii	Douglas's violet								X	
VISCACEAE										
Arceuthobium occidentale	western dwarf mistletoe		X							
Phoradendron villosum	hairy mistletoe					X				
VITACEAE										
Vitis californica	California grape				X					
Vitis vinifera *	wine grape				X					
Monocots										
CYPERACEAE										
Carex barbarae	Santa Barbara sedge				X					
Carex serratodens	serpentine sedge									X
Eleocharis macrostachya	pale spikerush					X				
Scirpus pungens	three-square				X					X

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
IRIDACEAE										
Iris macrosiphon	bowl-tubed iris							X		
Sisyrinchium bellum	blue-eyed grass					X				
JUNCACEAE										
Juncus bufonius ssp. *bufonius*	toad rush						X			
Juncus mexicanus	Mexican rush				X					X
Juncus oxymeris	pointed rush									X
Juncus patens	spreading rush				X					
Juncus tenuis	slender rush						X			
Juncus xiphioides	iris-leaved rush				X					
LILIACEAE										
Allium amplectans	narrow-leaved onion								X	
Allium falcifolium	sickle-leaved onion								X	
Allium fimbriatum var. *fimbriatum*	fringed onion								X	
Allium fimbriatum var. *purdyi*	Purdy's onion								X	
Allium serra	serrated onion					X				
Brodiaea elegans ssp. elegans	harvest brodiaea						X			
Calochortus amabilis	Diogenes' lantern							X		
Calochortus superbus ?	superb mariposa tulip	X?								
Chlorogalum pomeridianum ssp. pomeridianum	wavy-leafed soap plant							X		
Dichelostemma capitatum	blue dicks					X	X			
Dichelostemma volubile	twining brodiaea								X	
Fritillaria affinis var. *affinis*	checker lily							X		
Fritillaria pluriflora	adobe lily									X
Fritillaria purdyi	Purdy's fritillary								X	
Triteleia laxa	Ithuriel's spear						X			
Triteleia peduncularis	long-rayed triteleia									X
Zigadenus fremontii	Fremont's star lily		X		X			X		
Zigadenus micranthus var. *fontanus*	marsh zigadenus									X

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
ORCHIDACEAE										
Epipactis gigantea	stream orchid									X
Piperia sp.	rein-orchid	X								
POACEAE										
Agrostis microphylla	small-leaved bentgrass									X
Alopecurus pratensis *	meadow foxtail						X			
Avena barbata *	wild oats					X	X			
Briza maxima *	rattlesnake grass						X			
Bromus carinatus var. *carinatus*	California brome							X		
Bromus diandrus *	rip-gut brome						X			
Bromus hordeaceus *	soft chess						X			
Bromus laevipes	woodland brome			X						
Bromus madritensis var. *rubens* *	red brome					X				
Cynodon dactylon *	Bermuda grass				X					
Cynosurus echinatus *	dog-tail grass					X				
Dactylis glomerata *	orchard grass					X				
Festuca arundinacea *	meadow fescue				X					
Festuca californica	California fescue							X		
Festuca idahoensis	blue bunchgrass					X				
Glyceria leptostachya	Davy's manna grass									X
Hordeum brachyantherum ssp. *calif.*	serpentine meadow barley									X
Hordeum marinum ssp. *gussoneanum* *	Mediterranean barley						X			
Hordeum murinum var. *leporinum* *	wall barley						X			
Leymus triticoides	creeping wild rye						X			
Lolium multiforum *	Italian ryegrass					X	X			
Melica californica	California melic					X				
Melica torreyana	Torrey's melic							X		
Nassella lepida	small-flowered needlegrass					X		X		
Nassella pulchra	purple needlegrass					X				
Phalaris aquatica *	Harding grass						X			

*denotes non-native species ?denotes species identification uncertain

Scientific Name	Common name	Int. live oak - blue oak	Int. live oak	Mixed oak	Valley oak riparian	Blue oak	Annual grass-lands	East county chap-arral	Ser-pentine chap-arral	Other
Piptatherum miliaceum *	smilo				X					
Poa bulbosa *	bulbous bluegrass						X			
Poa secunda ssp. secunda	pine bluegrass					X				
Poa sp.						X				
Polypogon maritimus *	maritime beard grass					X				
Taeniantherum caput-medusae *	medusa head					X				
Vulpia microstachya var. confusa	Tracy's foxtail							X		
Vulpia microstachya var. pauciflora	Nuttall's foxtail							X		
POTAMOGETONACEAE										
Potamogeton sp.	pondweed									X
TYPHACEAE										
Typha domingensis	southern cattail				X					X

[I]Compiled by Jake Ruygt. Field visits: April 15, 21, 2002 (Foley Creek – Long Canyon loop); March 8, 21, 31; April 14, 22, May 24, June 21 2003; April 10; June 19, 2004.

Appendix F.
Birds of the Knoxville Wildlife Area

Actual and potential bird species occurring at the Knoxville Wildlife Area. The list includes all species observed at the Homestake Mining Company, McLaughlin Mine, now the UC McLaughlin Reserve adjacent to the KWA (Enderlin 2002).

Common and Latin Name	Probable status at KWA*	Napa County Breeding Bird Atlas**	Observed during 2003-2004 biological inventory***
LOONS			
Common Loon (*Gavia immer*)	I		
GREBES			
Pied-billed Grebe (*Podilymbus podiceps*)	I		
Horned Grebe (*Podiceps auritus*)	I		
Eared Grebe (*Podiceps nigricollis*)	I		
Western Grebe (*Aechmophorus occidentalis*)	I		
Clark's Grebe (*Aechmophorus clarkii*)	I		
CORMORANTS			
Double-crested Cormorant (*Phalacrocorax auritus*)	I		
HERONS, BITTERNS			
Great Blue Heron (*Ardea herodias*)	YR		
Great Egret (*Casmerodius albus*)	I		
Cattle Egret (*Bubulcus ibis*)	I		
Green Heron (*Butorides virescens*)	YR		
VULTURES			
Turkey Vulture (*Cathartes aura*)	YR	Possible	X
DUCKS, GEESE, SWANS			
Greater White-fronted Goose (*Anser albifrons*)	I		
Snow Goose (*Chen caerulescens*)	I		
Canada Goose (*Branta canadensis*)	I		
Tundra Swan (*Cygnus columbianus*)	I		
Wood Duck (*Aix sponsa*)	I		
Gadwall (*Anas strepera*)	I		
American Wigeon (*Anas americana*)	I		
Mallard (*Anas platyrhynchos*)		Confirmed	X
Cinnamon Teal (*Anas cyanoptera*)	I		
Northern Shoveler (*Anas clypeata*)	I		
Northern Pintail (*Anas acuta*)	I		
Green-winged Teal (*Anas crecca*)	I		
Canvasback (*Aythua valisineria*)	I		
Redhead (*Aythya americana*)	I		
Ring-necked Duck (*Aythya collaris*)	I		
Lesser Scaup (*Aythya affinis*)	I		
Bufflehead (*Bucephala albeola*)	I		

Common and Latin Name	Probable status at KWA*	Napa County Breeding Bird Atlas**	Observed during 2003-2004 biological inventory***
DUCKS, GEESE, SWANS (continued)			
Common Goldeneye (*Bucephala clangula*)	I		
Hooded Merganser (*Lophodytes cucullatus*)	I		
Common Merganser (*Mergus merganser*)	I		
Red-breasted Merganser (*Mergus serrator*)	I		
Ruddy Duck (*Oxyura jamaicensis*)	I		
OSPREY			
Osprey (*Pandion haliaetus*)	YR		
HAWKS, KITES, EAGLES			
White-tailed Kite (*Elanus leucurus*)	YR		X
Bald Eagle (*Haliaeetus leucocephalus*)	YR		X
Northern Harrier (*Circus Cyaneus*)	YR		
Sharp-shinned Hawk (*Accipiter striatus*)	YR	Possible	
Cooper's Hawk (*Accipiter cooperii*)	YR	Confirmed	
Red-shouldered Hawk (*Buteo lineatus*)	YR		
Red-tailed Hawk (*Buteo jamaicensis*)	YR	Confirmed	X
Golden Eagle (*Aquila chrysaetos*)	YR	Possible	
FALCONS			
American Kestrel (*Falco sparverius*)	YR	Confirmed	
Merlin (*Falco columbarius*)	M		
Peregrine Falcon (*Falco peregrinus*)	YR		
Prairie Falcon (*Falco mexicanus*)	YR		X, breeding confirmed
PHEASANTS, TURKEY			
Ring-necked Pheasant (*Phasianus colchicus*)	YR		
Turkey (*Meleagris gallopavo*)	YR	Confirmed	
QUAIL			
Mountain Quail (*Oreortyx pictus*)	YR	Confirmed	X
California Quail (*Callipela californica*)	YR	Confirmed	X
RAILS, COOTS			
American Coot (*Fulica americana*)	YR		X
PLOVERS			
Killdeer (*Charadrius vociferus*)	YR	Confirmed	
AVOCET			
American Avocet (*Recurvirostra americana*)	I		
SHOREBIRDS			
Greater Yellowlegs (*Tringa melanoleuca*)	I		
Spotted Sandpiper (*Actitis macularia*)	SR		
Dunlin (*Calidris alpina*)	I		
Short-billed Dowitcher (*Limnodromus griseus*)	I		

Common and Latin Name	Probable status at KWA*	Napa County Breeding Bird Atlas**	Observed during 2003-2004 biological inventory***
SHOREBIRDS (continued)			
Common Snipe (*Gallinago gallinago*)	I		
GULLS,TERNS			
Gull sp.	I		
Caspian Tern (*Sterna caspia*)	I		
DOVES			
Rock Dove (*Columba livia*)	YR	Confirmed	
Band-tailed Pigeon (*Columba fasciata*)	YR		
Mourning Dove (*Zenaida macroura*)	YR	Confirmed	X
CUCKOOS, ROADRUNNERS			
Greater Roadrunner (*Geococcyx californianus*)	YR		
BARN OWL			
Barn Owl (*Tyto alba*)	YR	Confirmed	X,breeding confirmed
TYPICAL OWLS			
Western Screech Owl (*Otus kennicottii*)	YR	Confirmed	X
Great Horned Owl (*Bubo virginianus*)	YR		
Northern Pygmy Owl (*Glaucidium gnoma*)	YR		X
Burrowing Owl (*Athene cunicularia*)	W		
Long-Eared Owl (*Asio otus*)	YR	Confirmed[I]	
Short-Eared Owl (*Asio flammeus*)	W		
Northern Saw-Whet Owl (*Aegolius acadicus*)	YR		
GOATSUCKERS			
Common poor-will (*Phalaenoptilus nutallii*)	SR	Possible	
SWIFTS			
Vaux's Swift (*Chaetura vauxi*)	M, SR?		
White-Throated Swift (*Aeronautes saxatalis*)	YR		X
HUMMINGBIRDS			
Black-Chinned Hummingbird (*Archilochus alexandri*)	M, SR?		
Anna's Hummingbird (*Calypte anna*)	YR	Confirmed	X
Calliope Hummingbird (*Stellula calliope*)	M		
Rufous Hummingbird (*Selasphorus rufus*)	M		
Allen's Hummingbird (*Selasphorus sasin*)	M, SR?		
KINGFISHERS			
Belted Kingfisher (*Ceryle alcyon*)	YR		X
WOODPECKERS			
Lewis' Woodpecker (*Melanerpes lewis*)	W, YR?		
Acorn Woodpecker (*Melanerpes formicivorous*)	YR	Confirmed	X
Red-breasted Sapsucker (*Sphyrapicus ruber*)	W		

Common and Latin Name	Probable status at KWA*	Napa County Breeding Bird Atlas**	Observed during 2003-2004 biological inventory***
WOODPECKERS (continued)			
Nuttall's Woodpecker (*Picoides nuttallii*)	YR	Possible	X
Downy Woodpecker (*Picoides pubescens*)	YR	Possible	X
Hairy Woodpecker (*Picoides villosus*)	YR	Confirmed	
Northern (Red-shafted) Flicker (*Colaptes auratus*)	YR	Confirmed	X
Pileated Woodpecker (*Dryocopus pileatus*)	YR	Confirmed	
TYRANT FLYCATCHERS			
Olive-Sided Flycatcher (*Contopus borealis*)	M, SR?		
Western Wood Pewee (*Contopus Sordidulus*)	SR	Confirmed	
Hammond's Flycatcher (*Empidonax hamondii*)	M		
Dusky Flycatcher (*Empidonax oberholseri*)	M		
Pacific-slope Flycatcher (*Empidonax difficilis*)	SR	Confirmed	X
Black Phoebe (*Sayornis nigricans*)	YR	Confirmed	X
Say's Phoebe (*Sayornis saya*)	W, YR?		X
Ash-throated Flycatcher (*Myiarchus cinerascens*)	SR	Confirmed	X
Western Kingbird (*Tyrannus verticalis*)	SR	Confirmed	X
SHRIKES			
Loggerhead Shrike (*Lanius ludovicianus*)	M		
VIREOS			
Cassin's Vireo (*Vireo cassinii*)	SR	Possible	
Hutton's Vireo (*Vireo huttoni*)	YR	Possible	X
Warbling Vireo (*Vireo gilvus*)	SR	Confirmed	
JAYS, CROWS			
Steller's Jay (*Cyanocitta cristata*)	I		
Western Scrub-Jay (*Aphelocoma californica*)	YR	Confirmed	X
Yellow-Billed Magpie (*Pica nuttalli*)	YR	Probable	
American Crow (*Corvus brachyrhynchos*)	YR	Possible	
Common Raven (*Corvus corax*)	YR	Probable	X
SWALLOWS			
Purple Martin (*Progne subis*)	M, SR?		
Tree Swallow (*Tachycineta bicolor*)	YR?		
Violet-green Swallow (*Tachycineta thalassina*)	SR	Confirmed	X
Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)	SR		
Cliff Swallow (*Hirundo pyrrhonota*)	SR	Confirmed	
Barn Swallow (*Hirundo rustica*)	SR	Possible	
TITMOUSE			
Oak Titmouse (*Parus inornatus*)	YR	Confirmed	X

Common and Latin Name	Probable status at KWA*	Napa County Breeding Bird Atlas**	Observed during 2003-2004 biological inventory***
BUSHTIT			
Common Bushtit (*Psaltriparus minimus*)	YR	Confirmed	X
NUTHATCHES			
Red-Breasted Nuthatch (*Sitta canadensis*)	I		
White -breasted Nuthatch (*Sitta carolinensis*)	YR	Confirmed	X
CREEPERS			
Brown Creeper (*Certhia americana*)	W, YR?	Possible	
WRENS			
Rock Wren (*Salpinctes obsoletus*)	YR	Possible	
Canyon Wren (*Catherpes mexicanus*)	YR		X
Bewick's Wren (*Thryomanes bewickii*)	YR	Possible	X
House Wren (*Troglodytes aedon*)	SR	Confirmed	X
KINGLETS			
Golden-crowned Kinglet (*Regulus satrapa*)	W		
Ruby-crowned Kinglet (*Regulus calendula*)	W		
GNATCATCHERS			
Blue-gray Gnatcatcher (*Polioptila caerulea*)	SR	Confirmed	X
THRUSHES, BLUEBIRDS, SOLITARIES			
Western Bluebird (*Sialia mexicana*)	YR	Confirmed	X
Hermit Thrush (*Catharus guttatus*)	W		X
American Robin (*Turdus migratorius*)	YR	Confirmed	X
Varied Thrush (*Ixoreus naevius*)	W		
WRENTITS			
Wrentit (*Chamaea fasciata*)	YR	Probable	X
MOCKINGBIRDS, THRASHERS			
Northern Mockingbird (*Mimus polyglottos*)	I		
California Thrasher (Toxostoma redivivum)	YR	Confirmed	X
STARLINGS			
European Starling (*Sturnus vulgaris*)	YR	Confirmed	
PIPITS			
American Pipit (*Anthus rubescens*)	W		
WAXWINGS			
Cedar Waxwing (*Bombycilla cedrorum*)	W		
SILKY FLYCATCHERS			
Phainopepla (*Phainopepla nitens*)	I, SR?		
WOOD WARBLERS			
Orange-crowned Warbler (*Vermivora celata*)	SR	Confirmed	X
Nashville Warbler (*Vermivora ruficapilla*)	M		
Yellow Warbler (*Dendroica petechia*)	M, SR?		

Common and Latin Name	Probable status at KWA*	Napa County Breeding Bird Atlas**	Observed during 2003-2004 biological inventory***
WOOD WARBLERS (continued)			
Yellow-rumped Warbler (*Dendroica coronata*)	W		
Black-throated Gray Warbler (*Dendroica nigrescens*)	M		
Townsend's Warbler (*Dendroica townsendi*)	M		
Hermit Warbler (*Dendroica occidentalis*)	M		
MacGillivray's Warbler (*Oporornis tolmiei*)	M		
Wilson's Warbler (*Wilsonia pusilla*)	SR	Probable	
Yellow-Breasted Chat (*Icteria virens*)	M, SR?		
TANAGERS			
Western Tanager (*Piranga ludoviciana*)	SR	Possible	
SPARROWS, TOWHEES			
Spotted Towhee (*Pipilo maculatus*)	YR	Confirmed	X
California Towhee (*Pipilo crissalis*)	YR	Confirmed	X
Rufous-crowned Sparrow (*Aimophila ruficeps*)	YR	Probable	X
Chipping Sparrow (*Spizella passerina*)	SR		
Lark Sparrow (*Chondestes grammacus*)	YR	Confirmed	X
Sage Sparrow (*Amphispiza belli*)	YR	Probable	X
Savannah Sparrow (*Passerculus sandwichensis*)	W		
Fox Sparrow (*Passerlla iliaca*)	W		X
Song Sparrow (*Melospiza melodia*)	YR		
Lincoln's Sparrow (*Melospiza lincolnii*)	W		
White-crowned Sparrow (*Zonotrichia leucophrys*)	W		X
Golden-crowned Sparrow (*Zonotrichia atricapilla*)	W		X
Dark-eyed (Oregon) Junco (*Junco hyemalis*)	W, YR?	Possible	X
GROSBEAKS, BUNTINGS			
Black-Headed Grosbeak (*Pheucticus melanocephalus*)	SR	Confirmed	X
Lazuli Bunting (*Passerina amoena*)	SR	Possible	
MEADOWLARKS, BLACKBIRDS, ORIOLES			
Red-winged Blackbird (*Agelaius phoeniceus*)	YR	Possible	X
Tricolored Blackbird (*Agelaius tricolor*)	I, SR?		
Western Meadowlark (*Sturnella neglecta*)	YR	Confirmed	X
Brewer's Blackbird (*Euphagus cyanocephalus*)	YR	Confirmed	
Brown-Headed Cowbird (*Molothrus ater*)	SR	Probable	
Northern (Bullock's) Oriole (*Icterus galbula*)	SR	Probable	X
FINCHES, GOLDFINCHES			
Purple Finch (*Carpodacus purpureus*)	YR	Probable	
House Finch (*Carpodacus mexicanus*)	YR	Confirmed	
Pine Siskin (*Carduelis pinus*)	W		

Common and Latin Name	Probable status at KWA*	Napa County Breeding Bird Atlas**	Observed during 2003-2004 biological inventory***
FINCHES, GOLDFINCHES (continued)			
Lesser Goldfinch (*Carduelis psaltria*)	YR	Confirmed	X
Lawrence's Goldfinch (*Carduelis lawrencei*)	SR	Confirmed	
American Goldfinch (*Carduelis tristis*)	W		

*Status: YR = year round resident, SR = spring/summer resident, W = winter resident, M = present during migration, I = incidental (appropriate habitat probably not present at the KWA, but may be present nearby).

**Breeding status in blocks containing the KWA (555295, 555290, 560290) from the *Breeding Birds of Napa County* (Berner et al. 2003).

***Birds observed incidentally while conducting targeted surveys for rare plants, weeds, amphibians.

[I]Breeding confirmed June 1990 on the South Knoxville Ranch by George Gamble and Bill Grummer.

Appendix G.
Mammals of the Knoxville Wildlife Area

Actual and potential mammal species occurring at the Knoxville Wildlife Area. The list includes all species observed at the Homestake Mining Company, McLaughlin Mine, now the UC McLaughlin Reserve adjacent to the KWA (Enderlin 2002).

Common and Latin Name	**Sighted or Collected at McLaughlin Reserve**
INSECTIVORES	
Ornate Shrew (*Sorex ornatus*)	X
Trowbridge Shrew (*Sorex trowbridgii*)	
MOLES	
California Mole (*Scapanus latimanus*)	X
BATS	
Big Brown Bat (*Eptesicus fuscus*)	X
Brazilian Free-Tailed Bat (*Tadarida brasiliensis*)	X
California Myotis (*Myotis californicus*)	X
Fringed Myotis (*Myotis thysanodes*)	X
Little Brown Bat (*Myotis lucifugus*)	
Hoary Bat (*Lasiurus cinereus*)	X
Long-Eared Myotis (*Myotis evotis*)	X
Long-Legged Myotis (*Myotis volans*)	X
Pallid Bat (*Antrozous pallidus*)	X
Silver Haired Bat (*Lasionycteris noctivagans*)	
Red Bat (*Lasiurus blossevillii*)	X
Spotted Bat (*Euderma maculatum*)	
Western Mastiff Bat (*Eumops perotis*)	
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	X
Western Pipistrelle (*Pipistrellus hesperus*)	X
Yuma Myotis (*Myotis yumanensis*)	X
CARNIVORES	
Badger (*Taxidea taxus*)	X
Black Bear (*Ursus americanus*)	X
Bobcat (*Lynx rufus*)	X
Common Striped Skunk (*Mephitis mephitis*)	X
Coyote (*Canis latrans*)	X
Gray Fox (*Urocyon cinereoargenteus*)	X
Mink (*Mustela vison*)	X
Mountain Lion (*Felis concolor*)	X
Raccoon (*Procyon lotor*)	X
Red Fox (*Vulpes vulpes*)	X

Common and Latin Name	Sighted or Collected at McLaughlin Reserve
CARNIVORES (continued)	
Ringtail (*Bassariscus astutus*)	X
River Otter (*Lontra canadensis*)	X
Western Spotted Skunk (*Spilogale gracilis*)	
LAGOMORPHS	
Black-tailed Jackrabbit (*Lepus californicus*)	X
Brush Rabbit (*Sylvilagus bachmani*)	X
MARSUPIALS	
Opossum (*Didelphis virginiana*)	X
RODENTS	
Botta's Pocket Gopher (*Thomomys bottae*)	X
Brush Mouse (*Peromyscus boylii*)	X
California Ground Squirrel (*Spermophilus beecheyi*)	X
California Vole (*Microtus californicus*)	X
Deer Mouse (*Peromyscus maniculatus*)	X
Dusky-footed Woodrat (*Neotoma fuscipes*)	X
Heermanns Kangaroo Rat (*Dipodomys heermanni*)	X
Pacific Jumping Mouse (*Zapus trinotatus*)	X
Piñon Mouse (*Peromyscus truei*)	X
Porcupine (*Erethizon dorsatum*)	X
San Juaquin Pocket Mouse (*Perognathus inornatus*)	
Sonoma Chipmunk (*Tamias sonomae*)	X
Townsend's Chipmunk (*Tamias townsendi*)	
Western Gray Squirrel (*Sciurus griseus*)	X
Western Harvest Mouse (*Reithrodontomys megalotis*)	X
UNGULATES	
Mule Deer (*Odocoileus hemionus*)	X
Pig (*Sus scrofa*)	X
Pronghorn (*Antilocapra americana*)	X
Tule Elk (*Cervus elaphus nannodes*)	X

This list includes mammals sighted as well as those thought to occur on the Reserve.

Appendix H.
Fish and Herptiles of the Knoxville Wildlife Area

Common and Latin Name	Sighted or Collected at McLaughlin Reserve	Sighted or Collected at the KWA During 2003/2004 Surveys
FISHES		
California roach (*Hesperoleucus symmetricus*)	Collected in Knoxville Creek	
SALAMANDERS		
Arboreal Salamander (*Aneides lugubris*)		
California Newt (*Taricha torosa*)	X	X
California Slender Salamander (*Batrachoseps attenuatus*)		
Ensatina (*Ensatina eschscholtzi*)		
Rough-skinned Newt (*Taricha granulosa*)	X	
TOADS AND FROGS		
Bullfrog (*Rana catesbeiana*)	X	X
Foothill Yellow-legged Frog (*Rana boylei*)	X	X
Pacific Tree Frog (*Hyla regilla*)	X	X
Red-legged Frog (*Rana aurora*)	X	
Western Toad (*Bufo boreas*)	X	
LIZARDS		
California Whiptail (*Cnemidophorous tigris*)	X	
Coast Horned Lizard (*Phrynosoma coronatum*)		
Northern Alligator Lizard (*Gerrhonotus coeruleus*)	X	
Northern Sagebrush Lizard (*Uta stansburiana*)	X	
Southern Alligator Lizard (*Gerrhonotus multicarinatus*)	X	
Western Fence Lizard (*Sceloporus occidentalis*)	X	
Western Skink (*Eumeces skiltonianus*)	X	
SNAKES		
Common Kingsnake (*Lampropeltis getulus*)	X	
California Mountain Kingsnake (*Lampropeltis zonata*)	X	
California Red-sided Garter (*Thamnophis sirtalis infernalis*)	X	X
Coachwhip (*Masticophis flagellum*)		
Western Yellowbelly Racer (*Coluber constrictor*)	X	X
Gopher Snake (*Pituophis melanoleucus*)	X	
Long-Nosed Snake (*Rhinocheilus lecontei*)		
Night Snake (*Hypsiglena torquata*)		

Common and Latin Name	Sighted or Collected at McLaughlin Reserve	Sighted or Collected at the KWA During 2003/2004 Surveys
SNAKES (cont.)		
Northern Pacific Rattlesnake (*Crotalus viridis oreganus*)	X	X
Ringneck (*Diadophis punctatus*)	X	
Rubber Boa (*Charina bottae*)		
Sharp-Tailed Snake (*Contia teuis*)		
Striped Racer (*Masticophis lateralis*)	X	
Western Aquatic Garter Snake (*Thamnophis couchi*)	X	
Western Terrestrial Garter Snake (*Thamnophis elegans*)	X	
TURTLES		
Western Pond Turtle (*Clemmys marmorata*)	X	X

Appendix I.
Prioritized Control Plans for Non-native Invasive Species at the Knoxville Wildlife Area

Note: the proposed measures are as recommended primarily by (Bossard et al. 2000) and by Element Stewardship Abstracts produced by the Nature Conservancy and available at http://tncweed.ucdavis.edu/esadocs/.

Scientific name: Tamarix parviflora
***Common name*: tamarisk, salt cedar**
Updated 9/2003

PRIORITY 1

❖ Description

Tamarisk is a many-branched shrub or tree less than 26 feet tall with small, with scale-like leaves that contain salt glands, and small white to deep-pink flowers.

❖ Current Distribution on the Site and Treatments to Date

Most tamarisk on the KWA is concentrated in riparian habitats along Knoxville and Eticuera Creeks. The Department and the University of California initiated a cooperative tamarisk eradication program in December 2001. CDF inmate crews removed growth to bare stumps, which were painted with a Garlon mix by DFG personnel. The initial effort ran through April 2002, from the upper end of the Knoxville Creek drainages (on the McLaughlin Reserve) to the Long Canyon corral. CDF crews returned in November 2002 and worked through March 2003 cutting tamarisk to stumps along Eticuera Creek (from the Long Canyon corral to the south end of the KWA). This time DFG personnel sprayed the fresh stumps with a less concentrated mix of Garlon. Resprouts were sprayed most intensively during summer 2003, but some during summer 2002. In October 2003, test spraying with Stalker showed far better results, and a re-spray of the entire drainage using this material is anticipated for late summer 2004 or early 2005.

❖ Damage and Threats

Tamarisk has the ability to crowd out native riparian species, reducing both plant and animal diversity, and increasing soil salinity to favor itself. It also alters hydrology, drying up springs and riparian areas and streams and lowering surface water tables.

❖ Measurable Goals and Objectives

Eradicate tamarisk from the KWA and monitor treated infestations for resprouting.

❖ Management Options

Prevention—Annual surveys to enable early detection and control, as well as prevention of seed introductions and disturbances that contribute to its success (fire, increased soil salinity, soil disturbance, etc) are critical to limiting tamarisk's distribution.

Eradication and control

- *Physical control:* Manual/mechanical methods do little to control tamarisk, since it resprouts vigorously following cutting or burning. Root plowing and cutting can clear heavy infestations, but only when followed up with herbicide treatments. Seedlings and small plants can be hand pulled. Fire does not kill tamarisk roots, but helps to thin heavy infestations, while flooding for 1-2 years can kill most salt cedar plants in a thicket (Lovich 2000).

- *Biological control:* Insects and fungi are currently being tested for tamarisk control. Cattle have been shown to consume considerable amounts of sprout growth (Lovich 2000).

- *Chemical control:* Heavy infestations often require stand thinning through controlled burns or mechanical removal prior to herbicide application. Herbicides commonly used to combat tamarisk include imazapyr, triclopyr, and glyphosate (Bossard et al. 2000). Perhaps the best is to apply imazapyr as "Arsenal" to the foliage, especially when a tank mix is used with a glyphosate herbicide such as Rodeo or RoundupPro (Lovich 2000). Arsenal is not registered for use in California, but "Stalker" is another imazapyr-based herbicide that is.

- *Integrated control:* The most frequently used method in California is to cut the shrub off to within 5 cm of the ground and apply triclopyr, either as Garlon 4 or Garlon 3A to the stump and around the perimeter of the cut stems within 1 minute of cutting, the latter of which should be applied during the growing season (Lovich 2000). Foliar application of herbicides to resprouts should be conducted within 4-12 months, and are best conducted with glyphosate or imazapyr; best results are achieved via application in late spring to early fall during good growing conditions (Lovich 2000).

ACTIONS PLANNED (Treatments and monitoring)

Summer 2004 – Spring 2005: Spray resprouts with Stalker.
Summer 2005: Survey for resprouting, continued treatments as needed.

Scientific name: Lepidium latifolium
***Common name*: Perennial pepperweed**
Updated 9/2003
**Adapted from Myers-Rice and Tu (2001)

PRIORITY 2

❖ Description

Perennial pepperweed is a broad-leaved member of the mustard family that grows up to 2 feet tall in dense stands. It has tiny clusters of white flowers at the ends of branches, flowers in the late spring-mid-summer, and is a prolific seed producer. Seed viability may be short (Miller et al. 1986).

❖ Current Distribution on the Site and Treatments to Date

Perennial pepperweed is largely limited to Knoxville Creek, centered around the historic Knoxville town site and including the surrounding roads, streams, gullies, and grasslands. It occurs in greatest abundance on the border with the McLaughlin Reserve, so an effective eradication strategy will require coordination with UC Davis. Department personnel sprayed pepperweed with Telar in late April and early May 2004 along seasonal creeks and other known areas of infestation.

❖ Damage and Threats

Perennial pepperweed threatens native species by its ability to form monospecific stands, as well as by increasing soil salinity (Blank and Young 1997). Should infestations become too dense, restoration activities may need to include soil remediation to address the salinity issue.

❖ Measurable Goals and Objectives

Prevent invasion of still-uninvaded habitats, contain and eradicate major infestation near Knoxville; and eradicate all satellite infestations.

(1) Eradicate all satellite infestations by summer, 2005.
(2) Contain and reduce acreage in the Knoxville area by 75% by summer, 2006;
(3) Eradicate Knoxville infestations by Summer, 2007.
(4) Replant infested areas with local willows, cottonwoods, and oaks.

❖ Management Options

Prevention—As control of perennial pepperweed is highly difficult (Howald 2000), prevention of new seed introductions and disturbances to soils and native plants that increase invasibility, as well as early detection and rapid eradication of new infestations, are key.

Eradication and control—An experimental and integrated approach will likely be needed to eradicate and control perennial pepperweed. Appropriate measures may include:

- *Physical control:* Unlikely, alone, to control perennial pepperweed because new plants quickly regenerate from pieces of rootstock left in the soil (Young et al. 1995). As a result, disking can increase the number of root fragments and spread them, and has worsened infestations in areas such as Grizzly Island. Cutting, pulling, and repeated mowing or weed whacking may reduce seed production, but mowing followed by herbicide application may be required to achieve complete control. The litter layer must be removed along with plants for successful restoration of native species.

- *Controlled burning:* unlikely to provide effective control, though control may be more effective where there is more fuel available to carry fire, such as in the Knoxville grasslands.

- *Inundation:* Perennial pepperweed may be intolerant of prolonged inundation during the growing season.

- *Biological control:* seems unlikely to provide feasible control due to the large number of crop species in the mustard family, as well as presence of several rare and threatened/endangered species in the mustard family.

- *Chemical control:* The most effective chemical control has been chlorsulfuron (Telar), methsulfuron methyl (Escort), and imazapyr (Arsenal), based on field trials (Cox 1997). Neither Escort or Arsenal is currently registered for use in California.

  Trumbo (1994) showed that chlorsulfuron, triclopyr, and glyposate at Grizzly Island Wildlife Area each controlled perennial pepperweed. Telar was most effective, with one application resulting in a reduction in cover of more than 95% after 2 years. In Lassen County, CA and Nevada (Young et al. 1998), one application of Telar provided up to 3 years of nearly complete control, with the best control achieved by application during the bud stage, though also with late spring and early fall applications. Telar was applied at 0.75-1 oz/acre, mixed in 30 gallons of water with 0.5% non-ionic surfactant. It is selective against broadleaved plants, which helps to prevent impacts to desirable species. Herbicide application has been found to be more effective when used alone than with fire or disking.

❖ Actions Planned

Fall 2004: Coordinate with McLaughlin Reserve to implement plan across Reserve/Wildlife Area boundary.

Summer 2005: Spray satellite populations with Telar.
Winter 2005: Plant locally collected willows, cottonwoods, and valley oaks.
Summer 2006: Monitor satellite populations, respray as necessary. Spray margins of main Knoxville population with Telar.
Winter 2006: Plant locally collected willows, cottonwoods, and valley oaks.
Summer 2007: Monitor resprouts from previously sprayed area, respray as necessary. Continue to spray main Knoxville population.
Winter 2007: Plant locally collected willows, cottonwoods, and valley oaks.
Summer 2008: Continue to monitor populations and respray as necessary.

Scientific name: Centaurea solstitialis
***Common name*: Yellow starthistle**
Updated 9/2003

PRIORITY 3

❖ Description

Yellow starthistle is an annual to biennial forb that germinates in the fall and produces a rosette during early spring, during which time it extends a deep taproot downward. It bolts in the late spring after annual grasses senesce and flowers during late June-August.

❖ Current Distribution on the Site and Treatments to Date

Starthistle is distributed throughout annual grasslands within the KWA although it is most prevalent in areas that have received past disturbance (e.g., the historic Knoxville town site), and along roads, trails, creeks, and around stock ponds (Appendix B). Away from roads and disturbed sites, its distribution is limited and patchy. In May and June 2004, starthistle was test sprayed by Department personnel using Transline around parking areas, the Long Canyon corrals, and several fields in Foley Canyon. The fields in Foley Canyon were disked prior to spraying.

❖ Damage and Threats

Starthistle reduces native biodiversity by forming monospecific stands, and can hinder the establishment, reproduction, and persistence of native species (DiTomaso and Gerlach 2000). It also degrades wildlife habitats and hinders public access.

❖ Measurable Goals and Objectives

Reduce starthistle cover in heavily infested areas and restore competitive stands of native species. Prevent and eradicate isolated infestations, and prevent spread into uninfested areas, including by:

(1) Eradicating the species along roads and trails leading to uninfested areas by 2008,
(2) Reducing and eventually eradicating dense infestations in grassland and riparian habitats along Knoxville and Foley Creeks by 50% by 2007, 75% by 2009, 100% by 2011, and
(3) cleaning vehicles and shoes before entering uninfested areas.

❖ Management Options

Prevention—Highest priority will be given to preventing and eradicating new outbreaks and to removing the plant from currently infested roads that lead to uninfested areas.

Eradication and control—In areas where starthistle has become dominant, such as grasslands along Knoxville Creek, one or more options may be used to control its spread, though it will be critical to ensure that control options do not threaten native species, soils, water quality, or ecosystem processes:

- *Physical control:* repeated mowing/weed whacking during the early flowering or bolting stage; or hand pulling of smaller infestations during the same stages, may work, but may also negatively impact late-season forbs.

- *Controlled burning:* prescribed fire during the early flowering or bolting stage has been shown to reduce seed production, and three years of it may almost entirely remove infestations and seed banks (DiTomaso et al. 1999). Burning at this time may also reduce the cover of other exotics such as medusahead (DiTomaso 2000), and may therefore be applied as part of a whole-systems approach to restoring communities from starthistle invasion.

- *Carefully timed controlled grazing:* during the bolting stage, grazing by goats, especially has been shown to reduce seed production (Thomsen et al. 1993; DiTomaso 2000), though the intensity of grazing required may be detrimental to native species and soils, and inputs of urine and dung may increase soil fertility and invasibility (Thomsen et al. 1993; Tu et al. 2001).

- *Chemical control:* early season herbicide application of Clopyralid (Transline) has been shown to dramatically reduce starthistle cover when applied at low levels (1.5-4 oz/acre) from January to May, but has detrimental effects on some native species within the Apiaceae, Asteraceae, Fabaceae, Polygonaceae, Solanaceae, and Violaceae families and has residual effects on soils for 1 year.

- *Biological control:* Six biological control species have been introduced to reduce yellow starthistle abundance, but are only roughly 40% effective (DiTomaso 2002). Some reports indicate that these insects are beginning to have an increasingly pronounced effect on this weed.

- *Restoration:* Native species such as perennial bunchgrasses and tarweeds have been shown to increase the resistance of habitats to starthistle invasion (Dukes 2002; Gelbard 2003). Fortunately, controlled burns timed to reduce starthistle reproduction and cover have been shown to favor native bunchgrass species such as *Nassella pulchra* (DiTomaso et al. 1999).

Overall, several years of integrated treatments, combined with monitoring to enable early detection and rapid eradication of new infestations will undoubtedly be necessary to contain and eradicate yellow starthistle and to restore invaded habitats.

Appendix I References

Blank, R. R., and J. A. Young. 1997. Lepidium latifolium: influences on soil properties, rate of spread, and competitive stature. Pages 69-80 *in* J. H. Brock, M. Wade, P. Pysek, and D. Greeen, eds. Plant invasions studies from North America and Europe. Backhuys, Leiden, Netherlands.

Bossard, C. C., J. M. Randall, and M. C. Hoshovsky. 2000. Invasive plants of California's wildlands. Berkeley, University of California Press.

Cox, T. 1997. Perennial pepperweed in Idaho Management of Perennial Pepperweed (tall whitetop). Special Report 972. USDA, Agricultural Research Service and Agricultural Experimental Station, Oregon State University, Corvallis, OR.

DiTomaso, J. M. 2000. Invasive weeds in rangelands: species, impacts and management. Weed Science 48:255-265.

_____. 2002. Element stewardship abstract for *Centaurea solstitialis* in http://tncweed.ucdavis.edu/esadocs/centsols.html.

DiTomaso, J. M., and J. D. J. Gerlach. 2000. *Centaurea melitensis* L. *in* C. Bossard, J. M. Randall, and M. C. Hoshovsky, eds. Invasive plants of California's Wildlands. University of California Press, Berkeley.

DiTomaso, J. M., G. B. Kyser, and M. S. Hastings. 1999. Prescribed burning for control of yellow starthistle (Centaurea solstitialis) and enchanced native plant diversity. Weed Science 47:233-242.

Dukes, J. S. 2002. Species composition and diversity affect grassland susceptibility and response to invasion. Ecological Applications 12:602-617.

Gelbard, J. L. 2003. Understanding the distribution of native vs. exotic plant diversity in California's grassland landscapes. Ph.D. Dissertation thesis, University of California, Davis.

Howald, A. 2000. *Lepidium latifolium* L. Pages 222-227 *in* C. Bossard, J. M. Randall, and M. C. Hoshovsky, eds. Invasive Plants of California's Wildlands. University of California Press, Berkeley.

Lovich, J. 2000. *Tamarix ramosissima* Ledeb./*Tamarix chinensis*/*Tamarix gallica*/*Tamarix parviflora*. Pages 312-317 *in* C. Bossard, J. M. Randall, and M. C. Hoshovsky, eds. Invasive Plants of California's Wildlands. University of California Press, Berkeley.

Miller, G. K., J. A. Young, and R. A. Evans. 1986. Germination of seeds of perennial pepperweed (*Lepidium latifolium*). Weed Science 334:252-255.

Myers-Rice, B., and M. Tu. 2001, Weed management for the Cosumnes River Preserve, Galt, CA. 2001-2005. The Nature Conservancy Wildland Invasive Species Program, Davis, CA.

Thomsen, C. D., W. A. Williams, M. R. George, W. B. McHenry, F. L. Bell, and R. S. Knight. 1993. Managing yellow starthistle on rangeland. California Agriculture 43:4-7.

Trumbo, J. T. 1994. Perennial pepperweed: a threat to wildland areas. California Exotic Pest Plant Council News 2:4-5.

Tu, M., C. Hurd, and J. M. Randall. 2001, Weed control methods handbook: tools and techniques for use in natural areas. Wildlands Invasive Species Program, The Nature Conservancy.

Young, J. A., D. E. Palmquist, and R. R. Blank. 1998. The ecology and control of perennial pepperweed (*Lepidium latifolium* L.). Weed Technology 12:402-405.
Young, J. A., C. E. Turner, and L. F. James. 1995. Perennial pepperweed. Rangelands 17:121-123.

Appendix J.
Notice of Completion, Environmental Checklist and Negative Declaration

Form A

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, PO Box 3044, Sacramento, CA 95812-3044 916/445-0613

SCH # _____

Project Title: Knoxville Wildlife Area Management Plan

Lead Agency: Dept. of Fish and Game | Contact Person: Tina Fabula

Street Address: P.O. Box 47 | Phone: (707) 944-5538

City: Yountville | Zip: 94599 | County: Napa

Project Location:

County: Napa and small part Yolo | City/Nearest Community: Berryessa Pines, Angwin, or Lower Lake

Cross Streets: Berryessa Knoxville Road | Zip Code: 95637 | Total Acres: 8,196

Assessor's Parcel No. many | Section: several | Twp. 10,11,12N | Range: 4,5W | Base: MDBM

Within 2 Miles: State Hwy #: none | Waterways: none

Airports: none | Railways: none | Schools: none

Document Type:

CEQA: ☐ NOP ☐ Early Cons ☒ Neg Dec ☐ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.)_____ ☐ Other _____

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other_____

Local Action Type:

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan

☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan

☐ Rezone ☐ Prezone ☐ Use Permit ☐ Land Division (Subdivision, etc.)

☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☒ Other Mgmt. Plan

Development Type:

☐ Residential: *Units*_____ *Acres*_____

☐ Office: *Sq.ft.*_____ *Acres*_____ *Employees*_____

☐ Commercial: *Sq.ft.* _____ *Acres*_____ *Employees*_____

☐ Industrial: *Sq.ft.* _____ *Acres*_____ *Employees*_____

☐ Educational _____

☐ Recreational _____

☐ Water Facilities: *Type*_____ *MGD*_____

☐ Transportation: *Type*_____

☐ Mining: *Mineral*_____

☐ Power: *Type*_____ *Watts*_____

☐ Waste Treatment: *Type*_____

☐ Hazardous Waste: *Type*_____

☒ Other: Fish and Game Wildlife Area Management Plan

Funding (approx.): Federal $ none | State $ 49,999.00 | Total $ 49,999.00

Project Issues Discussed in Document:

☐ Aesthetic/Visual
☒ Agricultural Land
☐ Air Quality
☒ Archeological/Historical
☐ Coastal Zone
☐ Drainage/Absorption
☐ Economic/Jobs
☐ Fiscal
☐ Flood Plain/Flooding
☐ Forest Land/Fire Hazard
☐ Geologic/Seismic
☐ Minerals
☐ Noise
☐ Population/Housing Balance
☐ Public Services/Facilities
☐ Recreation/Parks
☐ Schools/Universities
☐ Septic Systems
☐ Sewer Capacity
☐ Soil Erosion/Compaction/Grading
☐ Solid Waste
☐ Toxic/Hazardous
☒ Traffic/Circulation
☒ Vegetation
☐ Water Quality
☐ Water Supply/Groundwater
☒ Wetland/Riparian
☒ Wildlife
☐ Growth Inducing
☐ Landuse
☐ Cumulative Effects
☐ Other _____

Present Land Use/Zoning/General Plan Designation:

Napa County General Plan zoning: AW: agricultural - watershed. Yolo County: A1 - agricultural

Project Description:

The project is the Management Plan for the Knoxville Wildlife Area. The Plan discusses the area's primary purpose, appropriate recreational uses, biological resources on site, and potential management activities.

Revised 3-31-99

Reviewing Agencies Checklist

Form A, continued

KEY
S = Document sent by lead agency
X = Document sent by SCH
✓ = Suggested distribution

_____**Resources Agency**
_____Boating & Waterways
_____Coastal Commission
_____Coastal Conservancy
_____Colorado River Board
_____Conservation
_____Fish & Game
_____Forestry & Fire Protection
_____Office of Historic Preservation
_____Parks & Recreation
_____Reclamation Board
_____S.F. Bay Conservation & Development Commission
_____Water Resources (DWR)

Business, Transportation & Housing
_____Aeronautics
_____California Highway Patrol
_____CALTRANS District #_____
_____Department of Transportation Planning (headquarters)
_____Housing & Community Development

_____**Food & Agriculture**

Health & Welfare
_____Health Services _____

State & Consumer Services
_____General Services
_____OLA (Schools)

Environmental Protection Agency
_____Air Resources Board
_____California Waste Management Board
_____SWRCB: Clean Water Grants
_____SWRCB: Delta Unit
_____SWRCB: Water Quality
_____SWRCB: Water Rights
_____Regional WQCB #_____ (_____)

Youth & Adult Corrections
_____Corrections

Independent Commissions & Offices
_____Energy Commission
_____Native American Heritage Commission
_____Public Utilities Commission
_____Santa Monica Mountains Conservancy
_____State Lands Commission
_____Tahoe Regional Planning Agency

_____Other _____

Public Review Period (to be filled in by lead agency)

Starting Date _____ Ending Date _____

Signature _____ Date _____

Lead Agency (Complete if applicable):

Consulting Firm: _____
Address: _____
City/State/Zip: _____
Contact: _____
Phone: (_____) _____

Applicant: Department of Fish and Game
Address: P.O. Box 47
City/State/Zip: Yountville, CA 94599
Phone: (707) 944-5500

For SCH Use Only:

Date Received at SCH _____
Date Review Starts _____
Date to Agencies _____
Date to SCH _____
Clearance Date _____
Notes:

FINAL ENVIRONMENTAL CHECKLIST / NEGATIVE DECLARATION

The Knoxville Wildlife Area Management Plan is a project under the California Environmental Quality act that requires environmental analysis. This Appendix includes the full text of the Environmental Checklist/Negative Declaration that was prepared in conformance with the requirements of the State CEQA Guidelines.

Environmental Checklist Form

1. **Project title: Knoxville Wildlife Area Management Plan**

2. **Lead agency name and address:**
   California Department of Fish and Game
   Post Office Box 47
   Yountville, CA 94599

3. **Contact person and phone number:**
   Tina Fabula, DFG Assistant Lands Coordinator
   (707) 944-5538

4. **Project location**: The Wildlife Area is reached from the northern tip of Lake Berryessa off Berryessa Knoxville Road. The county road bisects the Wildlife Area in a north-south direction.

5. **Project sponsor's name and address**:
   California Department of Fish and Game
   Post Office Box 47
   Yountville, CA 94599

6. General plan designation:
   Napa: Agricultural and Open Space

7. Zoning:
   Napa: Agricultural and Open Space

8. Description of project:

   The project is the Knoxville Wildlife Area Management Plan. The primary purpose of the Wildlife Area is to protect and enhance habitat for wildlife species, and to provide the public with compatible, wildlife-related recreational uses. In addition, the Knoxville Wildlife area was acquired specifically to restore the riparian habitat of Eticuera, Foley, Long Canyon, and Knoxville Creeks. The Wildlife Area provides habitat for Special Status species, game species and other native species.

   The Plan provides a description of the Wildlife Area and its environment with emphasis on the natural ecological processes and native and non-native plants and animals that exist there. It also includes an evaluation of public uses that are compatible with the purpose of the Wildlife Area, and an evaluation of the appropriateness of adopting a State Wilderness designation.

   This Initial Study is intended to consider the whole of the project. As such, this project and this Negative Declaration includes the following components:

   - The ongoing operation of the Wildlife Area including the public uses incorporated in

this Plan.

- Maintenance activities to sustain the oak woodland, riparian, chaparral and grassland habitats including control of nonnative, invasive species.
- Installation of minor improvements to the Wildlife Area that do not involve substantial physical disruption of the Wildlife Area, such as parking areas, fencing, signage, wildlife water supply, and possibly restrooms.
- Maintenance of existing roads and other improvements to the Wildlife Area.
- The monitoring of plant and animal populations, public use, and related scientific research.
- Ongoing coordination with public agencies and private entities consistent with the objectives of this Plan.
- The dissemination of public information regarding the Wildlife Area that may include hardcopy and online data as well as other media.
- Regular updating of Wildlife Area regulations.
- Enforcement of duly adopted laws and regulations.

This Plan is a general policy guide to the management of the Wildlife Area. It does not specifically authorize or make any commitment to any substantive physical changes to the Wildlife Area. With the exception of minor operations and maintenance activities, any physical changes that are not currently approved will require subsequent authorizations and approvals. Because any such possible changes will be a part of projects, which have not yet been conceived, designed, or funded, it is not possible to reasonably evaluate the impacts of any such subsequent projects. Any such subsequent projects not included within the scope of this project will require analysis pursuant to CEQA when such projects are conceived and proposed.

9. **Surrounding land uses and setting: Briefly describe the project's surroundings:**

The Knoxville Wildlife Area consists of 8,196 acres in two discrete units. The primary unit, also known as the South Knoxville Ranch, consists of approximately 8,080 acres at the northeastern end of Napa County and parts of Yolo County. The South Knoxville Ranch is bordered to the north by McLaughlin Reserve (University of California) and the Cache Creek Natural Area (Bureau of Land Management (BLM)), and Knoxville Recreation Area (BLM). Other public ownerships in the nearby area include Lake Berryessa (Bureau of Reclamation (BOR)), and Cache Creek Wildlife Area, Cedar Roughs Wildlife Area, Lake Berryessa Wildlife Area; all owned by the Department. There is one 80-acre private ownership on the west boundary adjacent to Berryessa Knoxville Road. It is currently vacant property, having no buildings or improvements, only the remains of a stone chimney.

The McLaughlin Reserve is closed to public access and devoted primarily to academic teaching, and research. The BLM Knoxville Recreation Area is open to the public and permits grazing, camping, off-road-vehicle use, hunting, and many other types of recreational options. The BLM Cache Creek Management Area is open to the public, allows camping and hunting, but prohibits motorized access and grazing. The area is accessed through the DFG Cache Creek Wildlife Area lands and is cooperatively managed with Fish and Game. The Lake Berryessa Wildlife Area (surface management only - DFG) is open to the public but not to hunting or OHV use. The Cedar Roughs Wildlife Area (DFG) provides foot access to the much larger Cedar Roughs Wilderness Study Area (BLM) and is open to the public for hunting.

The smaller 92.5-acre Adams Creek unit of the Wildlife Area, consists of three irregularly-

shaped parcels located about 3.25 miles southwest of the southern tip of the primary unit. These parcels are located near Adams Creek and are surrounded by or adjacent to the BLM's Knoxville Recreation public lands.

10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.**
No other public agency approval is required for the adoption of the Knoxville Wildlife Area Management Plan.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

If implemented as written, this Plan could result in a "Potentially Significant Impact" involving at least one area of the environmental factors checked below, as indicated in the Environmental Checklist/Initial Study on the following pages.

□	Aesthetics	□	Agriculture Resources	□	Air Quality
□	Biological Resources	□	Cultural Resources	□	Geology /Soils
□	Hazards & Hazardous Materials	□	Hydrology / Water Quality	□	Land Use / Planning
□	Mineral Resources	□	Noise	□	Population / Housing
□	Public Services	□	Recreation	□	Transportation/Traffic
□	Utilities / Service Systems	□	Mandatory Findings of Significance	**X**	NONE

DETERMINATION:

On the basis of this initial evaluation:

X I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

□ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

□ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

□ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

□ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Robert W. Floerke, Regional Manager, Central Coast Region Date

Sonke Mastrup, Deputy Director, Wildlife and Inland Fisheries Division Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance

Environmental Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	□	□	□	X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	□	□	□	X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	□	□	□	X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	□	□	□	X
II. AGRICULTURE RESOURCES -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	□	□	□	X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	□	□	□	X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	□	□	□	X
III. AIR QUALITY -- Where available, the significance criteria established by the				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	□	□	□	X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	□	□	□	X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	□	□	□	X
d) Expose sensitive receptors to substantial pollutant concentrations?	□	□	□	X
e) Create objectionable odors affecting a substantial number of people?	□	□	□	X
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	□	□	□	X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	□	□	□	X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act	□	□	□	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
(including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	□	□	□	X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	□	□	□	X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	□	□	□	X
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?	□	□	X	□
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	□	□	X	□
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	□	□	□	X
d) Disturb any human remains, including those interred outside of formal cemeteries?	□	□	X	□
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk	□	□	□	□

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	□	□	□	X
ii) Strong seismic ground shaking?	□	□	□	X
iii) Seismic-related ground failure, including liquefaction?	□	□	□	X
iv) Landslides?	□	□	□	X
b) Result in substantial soil erosion or the loss of topsoil?	□	□	X	□
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	□	□	□	X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	□	□	□	X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	□	□	□	X
VII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	□	□	□	X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions	□	□	□	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
involving the release of hazardous materials into the environment?				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	□	□	□	X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	□	□	□	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	□	□	□	X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	□	□	□	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	□	□	□	X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	□	□	□	X
VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	□	□	□	X
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local	□	□	□	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	□	□	□	X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	□	□	□	X
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	□	□	□	X
f) Otherwise substantially degrade water quality?	□	□	□	X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	□	□	□	X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	□	□	□	X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	□	□	□	X
j) Inundation by seiche, tsunami, or mudflow?	□	□	□	X
IX. LAND USE AND PLANNING -- Would the project:				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	□	□	□	X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	□	□	□	X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	□	□	□	X
X. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	□	□	□	X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	□	□	□	X
XI. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	□	□	□	X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	□	□	□	X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	□	□	□	X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	□	□	□	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	□	□	□	X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	□	□	□	X
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	□	□	□	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	□	□	□	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	□	□	□	X
XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	□	□	□	X
Police protection?	□	□	□	X
Schools?	□	□	□	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Parks?	□	□	□	X
Other public facilities?	□	□	□	X
XIV. RECREATION --				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	□	□	□	X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	□	□	□	X
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	□	□	X	□
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	□	□	□	X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	□	□	□	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	□	□	□	X
e) Result in inadequate emergency access?	□	□	X	□

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
f) Result in inadequate parking capacity?	□	□	X	□
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	□	□	□	X
XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	□	□	□	X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	□	□	□	X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	□	□	□	X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	□	□	□	X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	□	□	□	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	□	□	□	X
g) Comply with federal, state, and local statutes and regulations related to solid waste?	□	□	□	X
XVII. MANDATORY FINDINGS OF SIGNIFICANCE --				
a) Does the project have the potential to	□	□	□	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	□	□	□	X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	□	□	□	X

EXPLANATIONS TO CHECKLIST ANSWERS:

I. AESTHETICS

a, b, c, and d. – No impact. Native vegetation dominates the Wildlife Area. No infrastructure developments other than improving the existing parking areas, adding interpretive and boundary signage or trails, and repairing or removing existing fencing is proposed. Temporary visual changes to the vegetation may occur from non-native plant management, but natural regeneration and/or replanting of native species will follow. No nighttime lighting is proposed.

II. AGRICULTURAL RESOURCES

a. No impact. The Wildlife Area is not Prime Farmland, Unique Farmland, of Farmland of Statewide Importance.

b. No impact - The use of the area for wildlife and open space is consistent with its County zoning which is agricultural. The area is not covered by a Williamson Act contract.

c. Less than Significant Impact - This Plan does not propose any significant changes in the agricultural practices that have existed on the property in recent historic time. None of the Wildlife Area has evidence of having ever been farmed or put to intensive agricultural use. The Gamble family used the area for cattle ranching and small mining claims in the 1920s to the 90s, before selling to Homestake Mining Company. (See subtitle: Historical Land Use, page 18). The Department may, in the future, use limited,

controlled grazing for weed management, and small areas may be managed intensively for weed control and planting of forage for wildlife.

III. AIR QUALITY

a, b, c, d, and e. – No Impact. Management of the Wildlife Area will not affect air quality, add pollutants, or create objectionable odors affecting a substantial number of people.

IV. BIOLOGICAL RESOURCES

a. – No Impact. The Wildlife Area is specifically managed with an Ecosystem Approach to benefit Special Status Species, other native species and game species. All activities will be in conformance with State and federal endangered species regulations and will be evaluated for potential impacts on Special Status Species.

b and c. – No Impact. Natural riparian areas will be improved both biologically and ecologically by removal of non-native tamarisk and regeneration of the native riparian vegetation. There are no plans to alter any of the serpentine soil areas. No wetlands other than man-made water retention ponds for cattle are known to occur on the property. The Department may maintain the berms that retain year round water for use by wildlife.

d and e. – No Impact. One of the purposes of the Wildlife Area is to maintain habitat for wildlife movement. The existing barbed-wire fencing does not restrict the movement of any wildlife species. Management of the Wildlife Area will not conflict with any ordinances that protect biological resources.

f. – No Impact. This Plan does not conflict with any Habitat Conservation Plan or Natural Community Conservation Plan. The acquisition of the Wildlife Area by the Department was supported by the local land conservation groups, including the Blue Ridge Berryessa Natural Area group (see subtitle: Acquisition of the Wildlife Area, page 16).

V. CULTURAL RESOURCES

a, b and d. – Less than Significant Impact.

The Plan incorporates two previous Cultural Resources Analyses that were conducted to evaluate the potential for impact on historic and archaeological resources due to construction of the three parking areas, continuing road maintenance, or proposed weed management and wildlife forage improvement projects. Cultural sites were or will be avoided and/or protected and all recommendations have been or will be followed to prevent significant impacts to cultural resources. No future substantive physical changes to the Wildlife Area will occur without site specific cultural evaluation by qualified professionals.

c. – No Impact

The projects discussed in this Plan do not alter any unique paleontological or unique geologic feature.

VI. GEOLOGY AND SOILS

a. – No Impact. The Management Plan does not propose the construction of human-occupied facilities other than temporary-use facilities such as restrooms. Public road access to the Wildlife Area is by the Berryessa Knoxville county road. Berryessa Knoxville road crosses Eticuera Creek in many places by in-stream cement floodways. The road and the crossings experience erosion and flood events that have the potential to create dangerous driving conditions. This road and its crossings are not owned or maintained by the Department.

b. – Less than Significant Impact. The Department will continue to remove tamarisk along Eticuera

Creek which will reduce the vegetative cover along the creek which could temporarily increase soil erosion in the creek bed. Natural regeneration and some additional riparian planting of native trees and shrubs will prevent this impact from being substantial.

c, d, and e. – No Impact
No buildings or septic systems are proposed.

VII. HAZARDS AND HAZARDOUS MATERIALS
a, b, c, d, e, f, and g. – No Impact
Not applicable to the Wildlife Area.

h. – No Impact. The Wildlife Area is not intermixed with residential or urbanized areas. The Wildlife Area is subject to periodic wildfire events due to the flammability of the vegetation. Recent wildfire events (1999 and 2004) combined to consume much of the 8,000+ acre Wildlife Area. Public visiting the area during the high-fire danger season are potentially exposed to wildfire risk.

VIII. HYDROLOGY AND WATER QUALITY
a, b, c, d, e. – No Impact. The Plan does not propose any changes to the existing natural drainage patterns in Knoxville Wildlife Area. The Plan does propose maintaining the existing ponds and existing water rights for wildlife use. These ponds were originally constructed for watering cattle and fire prevention.

f. – Less than Significant Impact. The Wildlife Area does not have piped, treated drinking water or restrooms. Any use of the area by mammals (humans, horses, dogs, and mammalian wildlife) increases the potential for waterways to become contaminated. Under current regulations, the public is allowed to primitive camp (carry in, carry out all supplies) for up to fourteen days. The majority of the public are aware of the potential of waterways to carry bacterial parasites and most people carry their own drinking water for day hikes or bring a water filter. The extremely low level of use of the Wildlife Area at this time makes this impact less than significant.

g, h, i, j. – Not applicable to this project.

IX. LAND USE AND PLANNING
a, b, and c. – No Impact. The Wildlife Area does not divide an established community, conflict with any landuse plan, or conflict with any applicable habitat conservation plan or natural community conservation plan.

X. MINERAL RESOURCES
a, and b. – No Impact.

XI. NOISE
a, b, c, d, e, f. – No Impact.

XII. POPULATION AND HOUSING
a, b, and c. – No Impact.

XIII. PUBLIC SERVICES
a, and b. – No Impact. The intensity and frequency of public use in the Wildlife Area is historically very low (it was open to the public in 2000). This Plan contains provisions for additional coordination with local public service and law enforcement agencies to deal with any future impacts as well as the proposal for additional Department law enforcement staffing.

XIV. RECREATION
a, and b. – No Impact.

XV. TRANSPORTATION / TRAFFIC
a. – Less Than Significant Impact. The Wildlife Area is served by one narrow, un-striped, winding County road; Berryessa-Knoxville Road. This road crosses the Eticuera creek about five times via paved stream crossings. There are no intersections to other County roads inside the Wildlife Area. The type of road and the remoteness of the location naturally dictate slow driving speeds. The increased traffic on this County road will be within its capacity.

b, c, and d. – No Impact.

e. – Less Than Significant Impact. The Wildlife Area is open to public use by foot, bicycle, and horse access only. Several miles of old ranch road are maintained by the Department for management and emergency response. However, because of the remoteness of the area, emergency response would be most practical by helicopter.

f. – Less Than Significant Impact. The Department has constructed three parking areas for public use.

XVII. Mandatory Findings of Significance
a. – No Impact. This Plan is supportive of habitat and wildlife species and cultural resources. It does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.

b. – No Impact. This Plan does not authorize any substantive physical changes and any unknown, future projects will require subsequent analysis when the specifics of a project are established. There are no impacts that are individually limited, but cumulatively considerable to the point of significance.

c. – No Impact. This Plan provides for compliance with all applicable laws and requirements. It does not authorize any substantive physical changes and any unknown future projects would require subsequent analysis when the specifics of a project are established. It will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.

INFORMATION SOURCES:
1. Knoxville Wildlife Area Management Plan. – DRAFT - June 2005. Department of Fish and Game, Central Coast Region.
2. A cultural resources study within the Knoxville Wildlife Area, Napa County, California. May 2004. Anthropological Studies Center, Sonoma State University.

Appendix K.
Public Comments and
Responses to Comments

The Knoxville Wildlife Area Draft Management Plan public review and comment period was July 15 to August 15, 2005. The Initial Study/Negative Declaration was posted at the Napa County Public Library, the Woodland Public Library, the Department of Fish and Game Central Coast Region's office in Yountville, and on the Department's internet web page at www.dfg.ca.gov. It was also circulated to the following public agencies for review: Resources Agency; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Parks and Recreation; Native American Heritage Commission; Office of Historic Preservation; Department of Water Resources; Department of Conservation; Caltrans, District 4; Caltrans, District 3. None of the public agencies responded with comments.

The following individuals and/or interest groups along with the subject area of their comments are listed below.

- Jim Eaton, Tuleyome, Inc. – re: opposition to the adoption of a Negative Declaration in regards to allowing hunting at the KWA, wilderness designation, opposition to the adoption of a Negative Declaration in regards to allowing grazing at the KWA, no shooting zones, remaining ranching infrastructure, cultural resource protection and habitat manipulation for game species
- Harris & Thompson, attorneys representing Dusty Sanderson – re: Dusty Sanderson's mineral claim.
- Cathy Haagen-Smit, International Mountain Bicycling Association – re: mountain biking and bike trails at the KWA.
- Ryan Henson, California Wilderness Coalition – re: wilderness protection and lack of designation of the KWA as wilderness.
- Carol Kunze, Berryessa Trails and Conservation group – re: working with volunteer groups, appropriateness of bicycle use within KWA, biological resources, invasive species, allowable uses, and trail development.

Tuleyome, Inc.
P.O. Box 74304
Davis, CA 95617

August 15, 2005

Tina Fabula
Associate Wildlife Biologist
Assistant Lands Coordinator
P.O. Box 47
Yountville, CA 94599

Dear Ms. Fabula,

Tuleyome is pleased to have this opportunity to comment on the draft Knoxville Wildlife Area Management Plan (Plan).

On the whole, we support most of the objectives and recommendations set forth in the Plan. For the most part, the Plan will protect the outstanding natural, wilderness, and recreational values of this important area. Unfortunately the Department of Fish and Game's bias in favor of hunting (i.e., bias in favor of "game species") too often seems in conflict with many of the excellent goals on maintaining the ecological health of the Knoxville Wildlife Area (KWA).

The potential impacts from habitat manipulation for game species and the possibility of hunting predators (e.g., coyotes, bobcats, and gray foxes) require that this plan be accompanied by an Environmental Impact Report. The Negative Declaration submitted by DFG is not adequate, considering the potential impacts of some of the uses proposed by the Plan.

In addition, *Tuleyome* finds that since the Wilderness Assessment agrees that much of the KWA qualifies as a state wilderness area, DFG should be proud to recommend the first such area on DFG lands, rather than finding excuses to oppose wilderness designation. The goals of the plan to maintain a healthy ecosystem can be met through the designation of this area as wilderness.

Wilderness Assessment

"Eligibility of the KWA for wilderness" [Page 56] As the Plan correctly points out, the 1,517 acres on the west side of the Berryessa-Knoxville Road is smaller than the acreage guideline in the California Wilderness Act. Since the Lauff Ranch, adjacent to the KWA, may come into state ownership, the wilderness review of this part of the KWA may need to be addressed at a future date.

[Page 57] As mentioned in the Plan, many of the developments (such as corrals) are on the edge of the potential wilderness and either be restored to a natural setting or the

wilderness boundary drawn to exclude these signs of humankind.

[Page 57] The fact that a visitor "is unlikely to ... hear a motorized vehicle (save an occasional airplane)" is immaterial. Congress frequently has designated wilderness areas where a visitor might be impacted by sights and sounds of civilization outside the wilderness, and the California Wilderness Act is more lenient than the federal act in its definition of wilderness.

"Compatibility of wilderness designation with the management goals of the KWA" [Page 58] As stated in this section, wilderness designation would have minimal effect on public uses of the area, aside from the use of bicycles or carts.

The biggest impact of wilderness designation for portions of the KWA would be on DFG's ability to use motorized and mechanized equipment. However, other managers of state land (primarily the Department of Parks and Recreation) are able to manage over a half million acres of state wilderness. They are able to construct and maintain trails and horse corrals, conduct prescribed burning, control invasive species, restore native plant species, and provide for wildlife needs.

DFG states that it currently uses chainsaws, tractors, all-terrain vehicles, other motor vehicles, bulldozers, water pumpers, and other heavy equipment to manage the KWA. *Tuleyome* maintains that while some agencies *like* to use motorized and mechanized equipment, it is not *necessary* for them to do so.

These same arguments were used by many federal agencies in years past to justify their recommendations against proposed wilderness areas. Yet today there are 14 *million* acres of federal wilderness in California that are successfully managed under wilderness management guidelines.

While we appreciate that most of the Plan for the KWA should preserve the eligibility of the KWA for future wilderness designation, *Tuleyome* respectfully suggests that DFG reconsider its opposition to wilderness in this Plan.

Management Goals and Tasks

For the most part, the "Management Goals and Tasks" are quite good. Many of the "Biological Elements" are based on sound science with "Tasks" that are appropriate and achievable. This is especially true of the goals of maintenance of a healthy ecosystem and the elimination of non-native species.

However, "Biological Goal 1.8 Maintain or simulate natural plant-herbivore interactions" [Page 78] falls short of most of the goals and tasks mentioned elsewhere. "Task 1.8.1" simply states "consider reintroduction of native grazers (i.e., elk)" with no additional analysis. Considering that Knoxville is a State Wildlife Area, it would seem that the consideration of the reintroduction of a native species such as elk would be a high priority.

Instead, "Task 1.8.2" [Page 78] recommends that we "consider using carefully managed cattle grazing to promote native grasses and forbs and to control non-native invasive species."

For the past decade, there has been no cattle grazing on the former Knoxville Ranch, now the KWA. And with the expiration of the grazing lease on the former Payne Ranch and the nonuse of the Perkins Creek Allotment, there currently are no cattle grazing the lands in the adjacent Cache Creek Management Area managed by the Bureau of Land Management. *Tuleyome* would like to see the elimination of commercial grazing become permanent in this area. This would include the use of cattle as a "management tool."

In 1997, California had roughly 16.4 million acres in federal grazing allotments, including 6.4 million acres managed by the BLM (Agricultural Issues Center). It is important to have lands without commercial grazing for research on how these ecosystems respond in the absence of livestock. This area has the potential for studying a wide variety of ungrazed ecotypes, especially when it is recognized that these lands are adjacent to other ungrazed lands managed by the Bureau of Land Management and the University of California's McLaughlin Reserve.

The negative impact of livestock grazing on native biodiversity in North America is well documented (Noss and Cooperrider,1994) (Jones 2002; Wuerthner and Matteson 2002). While the impacts of livestock grazing is spread across the landscape, degradation of wetlands is especially harmful (Belsky, Matzke, and Uselman, 2002; Kauffman, 2002). It is abundantly clear that elimination of grazing from riparian areas can result in significant improvement in habitat and fish population. (Roach 1995; Fouty 2002)

Grazing can be very non-selective and may endanger sensitive non-target species. Livestock can trample desirable sensitive species and spread noxious weeds over a wide range when seeds become attached to hair or when they remain intact after passing through the digestive system (DiTomaso 2002).

DFG's plan to use grazing as a "tool" for weed reduction appears to be limited to controlling yellow star thistle on the KWA. We are opposed to this plan.

A native of Eurasia, yellow star thistle was introduced to California around 1850 and has spread to 10 to 15 million acres in the state (Kuntz). Just as the spread of star thistle and other weedy species on the former Payne Ranch is likely due to cattle grazing (BLM Ukiah 2002), cattle grazing probably is the reason for the invasion of non-native species at the KWA. The loss of native bunch grasses also is likely due to cattle grazing.

The species that invade and increase following the decline of the bunch grasses are often aggressive nonnative species such as star thistle and medusa head. These exotics tend to be more fire prone (they dry earlier in season, for example) and thus fire frequencies increase. Native plants normally can recover from fire, but under conditions of overgrazing, they can be so stressed that recovery is more difficult,

allowing the exotics to increase still further. (Muir 2002)

There has been only one study published examining livestock's relative use of California native and alien grasses. The livestock preferentially avoided the aliens and preferentially ate the natives (especially in the long California dry season)—not exactly reducing competition for the natives (Van Dyne and Heady 1965).

Grazed yellow star thistle flowers later and with less seed sometimes, but it often increases in overall cover. Soil surface disturbance encourages star thistle. In addition most grazing animals prefer the perennial grass over star thistle (Rosentreter).

In the East Bay Regional Park District's Round Valley Regional Preserve prescribed fire has been used to control yellow star thistle. Alternatives of mowing, disking, and chemical treatment were determined not to be appropriate in this area due to anticipated environmental impacts and damage to the archeological resources in the park, and livestock grazing had been shown to increase the spread of the thistle. (Bouska 2001)

The 27,000-acre San Luis National Wildlife Refuge has upland areas where yellow star thistle comprises 80 to 90 percent of all plant species. Tule elk are found in a 761-acre enclosure on the refuge. Refuge managers conducted a study on the elk enclosure comparing different methods of star thistle control. For three years they burned 100 acres, treated 100 acres with the herbicide Transline, released bio-control Eurasian beetles on another 100 acres, and left 100 acres untouched. The results were a little surprising. As expected, the Transline treatment achieved a 70 percent reduction in star thistle plants, but managers found that the much-cheaper prescribed burning had equally effective results. In fact, the results were so good that managers have since burned the control plot and 300 acres outside the elk enclosure (Kuntz).

Elimination of star thistle may take years. Three or more years of intensive management may be necessary to significantly reduce star thistle. It is believed that established star thistle, with a large residual seed bank, will require a longer-term management program (DiTomaso 2002).

If grazing is used, it takes skill and experience to determine stocking rates and to care for the animals properly, thus a handler with vegetation management experience is necessary. Grazing earlier than late May or June, at the rosette stage, favors yellow star thistle development by elimination of competitive plants which do not regrow as quickly. Since most defoliated star thistle will recover from one grazing, it is necessary to bring the animals back one to four times at about two-week intervals under rotational grazing. (IPM 2002)

The cost to use cattle to manage yellow star thistle and other exotic plants is high. This will be especially true since the cattle must be brought back multiple times during the season, and this process must continue for a number of years. Yet DFG's "Materials, supplies, and capital equipment" budget for this Plan is only estimated to be $80,000 annually, and this includes all office supplies, materials, fuel, and small tools. Any funds

left over would not nearly be enough to pay for a conventional grazing operation, let alone one where cattle must be contained in a small area for only a few days, then repeatedly moved to new areas.

It must be recognized that control of weedy species such as yellow star thistle may take years or even decades. Once a piece of land that has been disturbed for a long time is released from the disturbance, it begins what ecologists call Secondary Succession. The result of Secondary Succession is weed dominance and a succession of different weed species for many, many years. The length of time depends on the degree of the disturbance and the size of the disturbance. The longer and greater, the less chance for native seeds to reinvade the site once the weeds restore the soil to a condition which will support them. When historical range lands are rested, weeds will take over and dominate the appearance for years or even decades. Cattle only keep the appearance of weeds down (all of the plants are weeds, and they just get grazed or trampled so you don't "really" see them) and weeds eliminate native plant and wildlife habitat. (Wuerthner 2000)

"Recent calls to use livestock to control weed infestations appear unlikely to succeed. Preferential grazing of native plant species over non-indigenous species by livestock, combined with livestock's disturbances of soils, microbiotic crusts, mycorrihizae, nutrients, and fire cycles, will likely keep these communities open to invasion and prevent community recovery. Not until plant communities and soils are allowed to recover their natural defenses such as healthy, deep-rooted native plants and intact microbiotic crusts will the spread and dominance of non indigenous weeds in the American West be reduced or reversed." (Belsky and Gelbard 2000)

For those reasons, *Tuleyome* opposes grazing on the lands in the KWA, whether this be by traditional leases or by using cattle as a management "tool." As expressed by ecologist David Dobkin, "We desperately need information on how these ecosystems respond in the absence of livestock in order to understand how they work. You can't do that when livestock are still a part of the system, because their impact alters everything." (Durbin 1997)

DFG should also be aware that the Central Valley Regional Water Quality Control Board is concerned about the impacts of grazing on mercury-contaminated soils, such as those which may be present at KWA. Amendments currently being considered for lands adjacent to the KWA to the north include Regional Board staff recommendations that "grazing moratoriums be reviewed for their effectiveness against erosion. The moratoriums should be either renewed or amended to further reduce erosion in mercury-enriched areas." (Central Valley Regional Water Quality Control Board)

An Environmental Impact Report must be conducted should this grazing element remain in the plan.

"Task 1.8.2," [Page 78] different from the "Task 1.8.2" discussed above, would consider "introduce wildlife forage in plots in appropriate areas to enhance or maintain viable populations of game species (quail, deer, turkey, or dove)." Tuleyome would like to

caution that the manipulation of the natural environment to favor game species may come at the expense of other plant and wildlife species. We oppose manipulating the KWA to "enhance" game species.

"Task 1.9.2" [Page 79] calls to "abate high priority erosion sources with earthmoving and by revegetating with native species as necessary." Again, we urge caution in using earthmoving equipment lest erosion be increased. Revegetating with native species seems a better option.

"Task 3.2.5" [Page 80] would "route regional trails ... away from sandstone bluffs to protect prairie falcon breeding habitat." While we support protecting falcon breeding habitat, DFG also should consider no shooting zones as well to minimize disturbance to nesting birds.

"Task 4.1.3" [Page 81] states: "maintain or improve food sources for game species. This may include planting, disking, mowing or other habitat management practices." Again, Tuleyome would like to caution that the manipulation of the natural environment to favor game species may come at the expense of other plant and wildlife species. We oppose manipulating the KWA to "enhance" game species.

"Management Constraints on the Biological Elements" [Page 82] states that "For example, managers of BLM land will need to consider a multiple-use mandate that provides for commercial uses (e.g., mining or wind energy development) of the land." Most of the BLM lands adjacent to the KWA are proposed for wilderness designation. Should Congress establish federal wilderness on these lands, any threats of mining, wind energy development, or other such uses would be eliminated.

"Public Use Element 1: Compatible public use" proposes "the restriction of certain uses such as bicycling and horse riding to a limited number of designated ranch roads." [Page 82] Tuleyome strongly supports the idea that trails are considered closed to certain uses unless specifically posted as open. It is far easier to control such uses now, before they become established in area inappropriate with the goals of managing the KWA.

"Task 1.1.4,"[Page 83] regarding identifying appropriate trails. See comments directly above.

"Public Use Element 2: Public access." states that "additional trail development, particularly on the steep and densely vegetated slopes leading up to Blue Ridge would be incompatible with the biological goals of this Plan (i.e., they would promote erosion and provide corridors for introduction of invasive species). [Page 83] While this statement sounds good, we expect there is little evidence to support it. The northern part of the Blue Ridge Trail climbs over 2,000 feet in very steep terrain, but the well-designed and constructed trail results in little erosion (especially in comparison to roads). Similarly, DFG's proposal to use cattle in the KWA would seem to be infinitely more likely to result in the spread of invasive species than hikers. *Tuleyome* does not believe that adequate evidence exists to conclude that hiker access (as opposed to access

by horses, mountain bikes, and vehicles) results in significant impacts to biological resources, and requests that DFG either provide adequate evidence to support the quoted contention or remove it. Considering the public support for an extensive Blue Ridge Trail, similar demand for additional access to this trail across public land should be expected. DFG should anticipate this demand, rather than dismiss it outright.

"Task 2.1.3" [Page 84] calls for improved "access from the BLM road along the north boundary of the KWA." Since this road is subject to washouts (and subsequent erosion) and is a source of vehicle trespass onto public lands, *Tuleyome* suggests that DFG not proceed with any improved access until the erosion and trespass issues are addressed.

"Public Use Goal 3.1" [Page 84] suggests that there is the "opportunity for [hunting] rabbits, quail, dove, squirrels, coyotes, bobcats, and gray foxes." Hunting of a large number of species inhabiting the KWA could be in direct conflict with the Plan's goals of maintenance of a healthy ecosystem and the elimination of non-native species. An Environmental Impact Report must be conducted should this element remain in the plan.

"Facility Maintenance Goal 1.5 Remove remnants of recent human activity (tanks, fences, etc.) provided that such remnants have to historical or management value." [Page 88] "Removal of ranching improvements will increase the wilderness value of the KWA." *Tuleyome* supports this goal. There is no need to retain paddocks, corrals, tanks, storage sheds, and water troughs in a State Wildlife Area.

"Facility Maintenance Element 2.1. Maintain stock ponds and water delivery systems with value for management or wildlife habitat, repair or remove non-functional dams."[Page 89] *Tuleyome* believes that there any many water facilities designed for providing water to cattle that can be removed to enhance the overall ecological health of the KWA.

"Facility Maintenance Element 3.1. Catalog and preserve all cultural resources..." [Page 90] *Tuleyome* strongly supports preservation of cultural resources in the area.

As mentioned above, *Tuleyome* supports many of the objectives and recommendations set forth in the Plan. Thank you for this opportunity to comment on the draft Knoxville Wildlife Area Management Plan.

Sincerely,

Jim Eaton

References

Agricultural Issues Center, University of California at Davis, aic.ucdavis.edu/pub/briefs/brief16a.pdf

Belsky, A. Joy and Jonathan Gelbard', "Livestock Grazing and Weed Invasions in the Arid West," Oregon Natural Desert Association, 2000

Belsky, A. Joy, Andrea Matzke, and Shaunna Uselman, "Livestock Destruction of Waters and Wetlands," in *Welfare Ranching*, Island Press, 2002

BLM Ukiah (Bureau of Land Management), "Cache Creek Coordinated Resource Management Plan/Environmental Assessment," September 2002

Bouska, Robert, "Yellow Star Thistle Grassland Restoration Prescribed Fire and Smoke Management Plan," Round Valley Regional Preserve, East Bay Regional Park District, March 2001

Central Valley Regional Water Quality Control Board, "Amendments to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the Control of Mercury in Cache Creek, Bear Creek, Sulphur Creek, and Harley Gulch, June 2005

DiTomaso, Joseph, "Yellow Star thistle Information," Weed Science Program, University of California at Davis, http://wric.ucdavis.edu/yst/yst.html

Durbin, Kathie, "Restoring a refuge: Cows depart, but can antelope recover?" *High Country News*, November 24, 1997

Fouty, Suzanne, "Piecing Together a Story of Change," in *Welfare Ranching*, Island Press, 2002

IPM ACCESS [Integrated Pest Management Information Service],"Yellow Star thistle," *IVM Technical Bulletin*, http://www.efn.org/~ipmpa/Noxystar.html

Jones, Allison, "A Summary of Research on Livestock Impacts," in *Welfare Ranching*, Island Press, 2002

Kauffman, J. Boone, "Riparian Zones, Biodiversity, and Degradation by Livestock," in *Welfare Ranching*, Island Press, 2002

Kuntz, Ben, "California study offers new hope for controlling noxious weeds" Rocky Mountain Elk Foundation Inc.,

http://www.rmef.org/conservation_section.html?main=/SO02ca.html

Muir, Patricia S., "How Does Overgrazing Affect Rangelands and Lead to Degradtion? Fall 2002, http://www.orst.edu/instruct/bi301/genconce.htm

Noss, R.F., and A.C. Cooperrider. Saving Nature's Legacy -- Protecting and Restoring Biodiversity. Island Press, Washington, DC, 1994.

Roach, Brian, "A Bioeconomic Analysis of Elk and Cattle Management Alternatives within the San Pedro Parks Wilderness Area - New Mexico, University of California, Davis, November, 1995, http://www.fguardians.org/cown-elk.htm

Rosentreter, Roger, Personal communication to George Wuerthner, 2001

Van Dyne, G. M. & H. F. Heady, "Botanical composition of sheep and cattle diets on a mature annual range," Hilgardia 36 (12), 1965

Wuerthner, George, Personal communication, May 2000

Wuerthner, George and Mollie Matteson, *Welfare Ranching*, Island Press, 2002

HARRIS & THOMPSON
AN ASSOCIATION OF ATTORNEYS

RICHARD W. HARRIS
RICHARD K. THOMPSON

6121 LAKESIDE DRIVE
SUITE 260
RENO, NEVADA 89511
PHONE (775) 825-4300
FAX (775) 825-4829

August 10, 2005

Ms. Tina Fabula (By Federal Express)
Department of Fish and Game
Project Manager, Knoxville Wildlife Area
Management Plan
P.O. Box 47
Yountville, California 94599

Mr. John Hoffnagle
The Land Trust of Napa County
1040 Main Street, Suite 203
Napa, California 94559

Mr. Larry Wyckoff
Department of Fish and Game
P.O. Box 47
Yountville, California 94599

Ms. Debra K. Townsend
Department of Fish and Game
Wildlife Conservation Board
1807 13th Street, Suite 103
Sacramento, California 95814

Mr. Paul A. Aigner
University of California, Davis
McLaughlin Reserve
26775 Morgan Valley Road
Lower Lake, California 95457-9411

Ms. Catherine E. Koehler
University of California, Davis
McLaughlin Reserve
26775 Morgan Valley Road
Lower Lake, California 95457-9411

Mr. Ray Krauss
Blue Ridge Berryessa Conservation Partnership
c/o The Land Trust of Napa County
1040 Main Street, Suite 203
Napa, California 94559-2605

Ms. Louise A. Vicencio
Easement Monitoring Coordinator
The Land Trust of Napa County
1040 Main Street, Suite 203
Napa, California 94559

Manager Land Services
Homestake Mining Company of California
c/o Barrick Gold Corporation
136 East South Temple, Suite 1050
Salt Lake City, Utah 84111

Mr. Terry Palmisano
Department of Fish and Game
Central Coast Region
20 Lower Ragsdale Drive
Monterey, California 93940

Mr. C. Scott Moore
Surveyor - McLaughlin Mine
Homestake Mining Company of California
26775 Morgan Valley Road
Lower Lake, California 95457

Ms. Nancy T. Templeton
State of California Seniors Staff Counsel
1416 Ninth Street, 13th Floor
Sacramento, California 95814

Re: Knoxville Wildlife Area

Dear Sirs and Madams:

This office represents Mr. Dusty Sanderson in regards to his mineral rights pertaining to portions of the property which is included in the proposed Knoxville Wildlife Area ("KWA") Management Plan (the "Plan"), which is out for public review with comments due by August 15, 2005.

Mr. Sanderson is concerned that the Plan does not properly address his rights to explore and develop his mineral rights. Mr. Sanderson requests that his rights be formally acknowledged in the Plan so as not to affect his title or adversely affect his ability to raise funds for mineral development.

The Plan purports to limit road construction and (although not formally addressed) mining activities in the KWA. These limitations would clearly infringe upon Mr. Sanderson's right to develop his oil, petroleum, coal oil, naptha, mineral or carbon oil, gas, asphaltum, hydrocarbons, and all similar or kindred things or substances (the "Minerals").

Mr. Sanderson has previously provided to Ms. Tina Fabula of the Department of Fish and Game, proof of an undivided 100% ownership of a mineral reservation affecting 5,350 acres (significant portions of which are situated within the KWA) which is senior to the creation of the KWA. Mr. Sanderson holds a perpetual right to enter, explore, and mine for the Minerals, including the right to create roads, build buildings, and disturb the surface at any time with only the requirement to reimburse the surface owner $50.00 per acre disturbed.

The Plan does officially recognize that Homestake Mining Company made its conveyance of the South Knoxville Ranch to the State of California subject to several mineral reservations including the reservation to Mr. Sanderson's predecessor-in-interest. However, there is no acknowledgment of the right of those mineral holders to develop their interests.

The Public Outreach Summary states that motor vehicle use and commercial activity are primary concerns of the public. Mr. Sanderson is concerned that the Plan will create the impression that no new roads can be established within the boundaries of the KWA and no increase in traffic will be allowed. This does not acknowledge Mr. Sanderson's legal right to create new roads and employ such traffic as is reasonably necessary to develop his Minerals.

The Plan further appears to restrict or limit "adverse effects on scenic vistas," "strong seismic ground shaking," and "objectionable odors." Clearly these might affect Mr. Sanderson's legal right to develop his mineral interest as well.

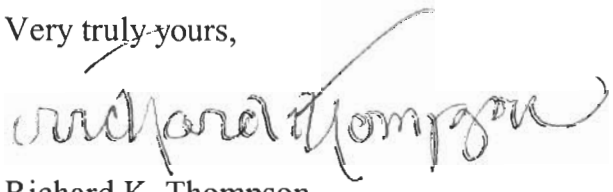
The Plan cannot prohibit my client from pursuing the activities described above. Furthermore, unless the Plan formally acknowledges Mr. Sanderson's rights it could affect his ability to raise funds to explore, develop, and mine the property, or to subdivide those rights by lease or sale to exploration companies or other interested parties.

At a meeting on June 13, 2005 between Mr. Sanderson and various environmental groups, including Ms. Fabula representing the Department of Fish and Game, an interest was shown in potentially purchasing Mr. Sanderson's rights in order to extinguish the mineral reservation and reunite the surface and mineral estates so that the area could be protected in perpetuity. Mr. Sanderson hereby goes on record as being willing to entertain an offer to acquire his interests. If the Department of Fish and Game, or any other group is interested, please contact this office within thirty (30) days. Thereafter, Mr. Sanderson intends to begin the process of developing his mineral rights.

In the absence of an offer, Mr. Sanderson hereby officially requests that the Plan include a formal acknowledgment of his rights under the Mineral Reservation attached as Exhibit A and that the Mineral Reservation be appended to the formal Plan when adopted.

Thank you for your attention.

Very truly yours,



Richard K. Thompson

RKT:hhr
enclosure
cc: University of California
Business Contracts Officer
Stephen T. Buehl, Esq.
NRS Reserve Director
General Counsel to the Regents
McLaughlin Mine, Manager

I·M·B·A
International Mountain Bicycling Association PO Box 7578 Boulder CO 80306 USA 303.545.9011 www.imba.com

Fish & Game

AUG 15 2005

Yountville

August 11, 2005

Department of Fish and Game
Attn: Project Manager,
Knoxville Wildlife Area Management Plan
P.O. Box 47
Yountville, CA 94599

Dear Project Manager:

Thank you for this opportunity to comment on the Department of Fish & Game's intention to adopt a Negative Declaration for the management of the Knoxville Wildlife Area. DFG has presented the public with a good CEQA document and has written a good general policy guide for the management of the Knoxville Wildlife Area in the Final Draft Management Plan.

As one of the Northern California representatives for the International Mountain Bicycling Association (IMBA), I represent thousands of mountain bicyclists who appreciate the efforts that land managers take to balance resource protection and recreational access to public lands. In this instance, we appreciate being recognized as stakeholders who potentially use the Knoxville Wildlife Area for passive outdoor recreation.

IMBA appreciates the thoughtful analysis regarding wilderness designation for the KWA in Chapter IV of the Final Draft Plan. IMBA favors appropriate protections against harmful development, but stands to loose access in officially designated wilderness areas. Similarly, the DFG has recognized the restrictions wilderness designation would place on staff in managing habitat, performing resource inventories, doing research and repairing the old ranch roads and stock ponds. We feel the Knoxville Wildlife Area Management Plan includes appropriate provisions for protecting natural resources while allowing access by mountain bike. (Page 58-59, Final Draft Plan.)

Under Chapter V of the Plan, DFG has presented a good analysis of compatible uses for the KWA. IMBA's position has long been that mountain bicycling is human powered recreation that is as compatible as hiking is with the DFG's goals of protection and enhancement of areas such as the KWA. Thank you for stating that mountain bicycling is a compatible use. Regarding hiking, the Department recognized the desire to connect to regional trails systems managed by BLM and BOR to the north and south of the KWA. (Page 65, Final Draft Plan.) Bicyclists who may be able to cover long distances in a day, would also seek to be included in any planning for trail linkages, as discussed in the hiking element.

Having ridden in BLM's Knoxville Recreation Area, I believe that the terrain of the adjacent KWA is precisely suitable for riding a bicycle with low - if any - impacts to the habitat. Thank you for referring to resources used by IMBA that point to studies indicating that a bicyclist's impact is much like that of a hiker and less than an equestrian. (Page 66, Final Draft Plan.)

You are also concerned that measures are taken to minimize environmental damage, but go on to state that impacts of bicycles on the environment "can be minimized with access restrictions that are identical to those for horses." You state this after you acknowledge bicyclists do not cause as much damage as horses. All users cause some sort of impacts and it is well recognized in trail literature that proper trail design can be sustainable. Bicyclists agree that certain restrictions are appropriate but suggest that restrictions might not have to be *identical* to those placed on equestrians, rather should be reasonably and equitably placed for ALL users, including hikers. As with the soils on BLM's nearby Payne Ranch and in the Knoxville Recreation Area, recreational use is virtually self-limiting. Heavy rains cause muddy conditions that are not good for any user. No impacts by hikers, bikers or horses are caused if they simply aren't out there. Hot or rainy weather extremes limit use and thereby limit impacts.

Conflicts and environmental impacts can be reduced by education and engineering, rather than polarizing users or restricting use. All users can become good trail stewards and can work together to assist the Department in reaching its goals.

If you have any questions, please contact me at (916) 663-4626.

Sincerely,

Cathy Haagen-Smit
Northern California IMBA Representative

7589 Ridge Road Newcastle, CA 95658 tandems2@sbcglobal.net (916) 663-4626

A Voice For Wild California

California Wilderness Coalition
North State Field Office
P.O. Box 993323, Redding, CA 96099
(530) 246-3087/Fax: same/rhenson@calwild.org

August 15, 2005

Department of Fish and Game
Attn: Project Manager, Knoxville Wildlife Area Management Plan
P.O. Box 47
Yountville, CA 94599

Dear Sir or Madam:

The Final Draft Knoxville Wildlife Area (KWA) Management Plan outlines a number of steps the California Department of Fish and Game can take to restore, protect and ecologically enhance the KWA. We support most of the plan's provisions, especially the habitat restoration elements and the prohibition on the recreational use of off-road vehicles.

The wilderness assessment presented in the plan is quite fair and we hope its findings will be repeated in the final version. As you know from our scoping comments, our organization and many other groups and individuals would like to see the KWA become part of the California Wilderness Preservation System at some point in the future. We therefore hope that the three items listed after "the Department may" on page 59 will be changed to "the Department *will*" in the final version of the plan. Lastly, to protect wilderness values, we request that the final version of the plan prohibit bicycles from using the portion of the KWA east of Knoxville-Berryessa Road.

Thank you for considering our input.

Ryan Henson
Policy Director

From: "Carol A. Kunze" <ckunze@ix.netcom.com>
To: Tina Fabula <cfabula@dfg.ca.gov>
Date: 8/12/2005 7:31:30 AM
Subject: Comments on the Draft Plans for the Cedar Roughs WA and the Knoxville WA

Tina,

I am leaving for vacation tomorrow morning so these comments, filed on behalf of Berryessa Trails and Conservation, will be briefer than we would like and informal.

In general, we are impressed with both documents. They are clear, well-written, and will be terrific resources and guides for both trail work and future conservation projects. Well done.

A couple of general comments. While hiking is a specific activity, trails facilitate both public and agency access for other purposes (photography, agency maintenance, etc.) and it would be nice to have this mentioned. It would also be nice to see a statement that DFG is open to working with volunteers. A volunteer-friendly approach might provide access to interested and experienced workers, and ease the path for non-profit organizations such as ours, which want to build trails and carry out conservation projects, such as combatting invasive species, on public land. We look forward to working with DFG in both areas.

CRWA

I saw a river otter in Pope Creek when I was hiking down the Pope Canyon Trail (http://sonic.net/berryessatrails/oldroad.htm).

Arundo has been found on Pope Creek, downstream from the CRWA. From Herb's Berryessa Projects page (http://www.herbhowe.members.sonic.net/projects/):
Invasive Species Removal

* Arundo to be eradicated:
  o Pope Canyon and Berryessa Pines - see (map <http://www.herbhowe.members.sonic.net/projects/Arundo.jpg> and a photo

<http://www.herbhowe.members.sonic.net/projects/pope_arundo.jpg> of clump A3 in Pope Canyon).

****
We would like to see primitive camping considered as an allowable activity as the report indicates, particularly for consistency with BLM CR parcel. We assume and support this not being in a fixed location, unless use develops to the point that a fixed location would be less of an impact.

We are generally OK with the decisions on horse-back riding and bicycles (no designated trails), but have not had time to confer with other members of the Trails and Recreation committee on this. We have some concerns about the decision to not prohibiting bicycles due to consistency issues with the BLM CR parcel which is up for wilderness

designation. We definitely concur with the prohibition on OHV use.

We very much support reviewing existing old roads and trails for integration into the BRBNA regional trail system, but want to be sure that DFG will consider the development of some new segments if they should be needed. It seems clear that consideration will be given to a new trail linking to the BLM Cedar Roughs parcel, but we don't want to foreclose other new segments. In general, however, we agree that we base the trails primarily on what already exists.

KWA

We generally agree with the decisions on camping and horse-back riding, and the prohibition on OHV.

We have some concern regarding designating bicycle trails as the report indicates that the area does qualify for state wilderness status and we are aware that the BLM parcel on Blue Ridge contiguous to the KWA has at various times been included in draft wilderness bills, although it is not up for current wilderness status. While not recommending state wilderness status due to the impact on costs for planned management activity, particularly activity related to combatting invasive species, the draft plan does indicate that attempts will be made to preserve the option for future designation. Bike trails will make any future designation of the KWA as state wilderness substantially less likely. In addition, the presence of bicycles do lessen the wilderness-type experience for other users. In a densely-forested area visual and physical contacts with bicycles are likely to be brief. In the KWA, however, with its long grassy valleys, many areas of sparse or virtually no trees, and overlooked by hikers on the Blue Ridge, bicycles are more likely to have a significant impact on the quality of the experience for other users.

We concur that any designated trails should be based primarily on the existing ranch roads. However, we would not want to completely forclose the possibility of developing a new segment of trail should there be an interest in accessing a particular viewpoint, creating a necessary link, or for other reason that makes consideration of a new segment advisable. In addition, we would like the unmapped ranch roads to be considered as part of the "existing ranch roads" not with a view to making all of them formal trails, but rather to allow consideration of these routes for inclusion in the regional trail system if it should be found that such inclusion were necessary for access to a particular area or needed to create a link or loop trail.

Finally, we strongly request that the possibility of a trail linking to the Blue Ridge not be foreclosed. A trail along the Blue Ridge is planned, and there is need for access from the KWA to that trail. Indeed, according to our own experience and discussion with other hikers, a fair number of hikers already climb to the Blue Ridge from the KWA. It is an almost irresistible trek for anyone who regularly hikes in the area and is an established destination. In fact, there is already one such route mapped and posted on the Internet. It seems likely that this type of activity (hiking to Blue Ridge) will increase rather than decrease.

The invasive species issue is not persuasive. The KWA is not a pristine area in terms of native plants. No particular reason is given as to why a single trail route to the ridge would present any risk over any other type of access or use that is allowed. In addition, a well constructed trail should not present an erosion risk, whereas an unplanned social trail that would inevitably develop if no sustainable trail is built.

We therefore suggest that it would be better to create such trail access to Blue Ridge, in order to minimize the impact on other likely areas of access and guide hikers away from sensitive areas such as prairie falcom aeries.

In particular, we recommend working with BLM to develop a trail link from the top of Long Canyon, already a designated hiking route, to the dirt road across the county line which leads to a trail up to the Blue Ridge. A map of the Long Canyon route is attached and can also be viewed at http://www.reflexpoint.org/~afulks/knoxville/longcanyon.jpg. In addition, a map of the Blue Ridge Trail and access road is attached with a potential access trail marked in blue (map can be viewed without blue linking trail at http://www.reflexpoint.org/~afulks/blue_s/blueridge_s.htm). This would allow access to the Blue Ridge trail without having to develop a new trail to the ridge in the northernmost part of the KWA.

It is in the more southern area of the KWA that a new access trail to the Blue Ridge should be considered.

Carol A. Kunze
Executive Director
Berryessa Trails and Conservation
901 Cape Cod Ct
Napa, CA 94558
www.berryessatrails.org
ckunze@ix.netcom.com
707.966.5211

Itemized Public Comments and DFG Responses:

1) Interest expressed in seeing DFG coordinate and work with volunteers on trail installation, trail alignment, trail maintenance, and various conservation projects.
   Response: Volunteer assistance can be helpful on DFG-approved conservation projects. If DFG staff are assigned to work at KWA on such projects, volunteer recruitment and utilization will be considered.

2) Comment that an Environmental Impact Report (EIR) instead of a Negative Declaration is required because the KWA Management Plan will allow hunting.
   Response: The Legislature has delegated authority to the Fish and Game Commission to regulate the take and possession of wildlife. The potential impacts from the legal hunting of game species in the State of California is evaluated on a yearly basis by the Fish and Game Commission through its regulatory process. A functionally equivalent environmental document is prepared to evaluate harvest levels and seasons throughout the state. The regulatory program of the Commission has been certified by the Secretary of Resources and the Commission is eligible to submit the environmental document in lieu of an EIR or Negative Declaration. (CEQA Guidelines 15252)

3) Opposition to the possibility of using grazing as a management tool at KWA to improve wildlife or plant habitat and a statement declaring that the use of grazing at KWA would require that an Environmental Impact Report (EIR) instead of a Negative Declaration be prepared. A separate comment was added stating that the potentially high cost of a managed grazing program has not been adequately budgeted for in the estimated KWA budget.
   Response: Task 1.8.2 on page 78 has been expanded to include an outline of a managed grazing program at KWA. All goals, evaluation criteria, and monitoring protocols would be developed by DFG before utilizing grazing as a management tool at the KWA . The Department's goals for a grazing program would be to improve the existing wildlife habitat or to improve the native to non-native plant species ratio and would be monitored to ensure that those goals were met. The Department is well-aware of the potential for environmental degradation from un-managed grazing. Grazing on Department-owned lands is considered an Article 19 Exempt Project, under CEQA Guideline 15307: Actions by Regulatory Agencies for Protection of Natural Resources…"Class 7 consists of actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment. Examples include but are not limited to wildlife preservation activities of the State Department of Fish and Game". This class 7 exemption is also expanded under Title 14 Section 757 Exempt Project (7) Class 7 (D): "Vegetation development, manipulation, or fertilization to increase habitat productivity for fish and wildlife." Finally, any managed grazing program would be designed and monitored to ensure that the activity does not have a significant impact on the environment. This Management Plan and the public review process qualify as

the environmental documentation for those wildlife improvement projects which otherwise fall under the Title 14, section 757 mentioned above.

The Operations and Management budget found on page 97 of the Management Plan is a proposed budget and is not funded by the State of California at this time. The additional costs of any managed grazing program would likely be covered by a grazing contract or be an additional amount added to the proposed KWA budget.

4) Request to consider no shooting zones adjacent to the falcon breeding sites that occur on the high cliffs along the eastern boundary of the KWA.

Response: This request implied that the noise from hunter's guns would impact the nesting behavior of this sensitive species, but this concern was not clearly stated.

The records of prairie falcon nests are located just outside of the KWA on BLM lands on steep cliffs. Due to the very steep terrain, lack of DFG-approved trails, and the fact that most hunting at KWA is for turkey and deer whose habitat is not found on the steep cliffs of the eastern boundary, the Department of Fish and Game believes that a no shooting area is not needed at this time.

In addition, plinking and target shooting are not allowed at KWA by Fish and Game regulation Title 14, Section 551 (c) which states; "except at designated shooting sites or with a special permit, possession in the field and use of firearms and archery equipment is permitted only for the purpose of hunting on all wildlife areas and on national wildlife refuges." (Also see page 62 of the Management Plan).

5) Comment in support of DFG removing most remnants of recent human activity (ex: old ranching facilities such as paddocks, tanks, sheds, etc) from the KWA if they have no historical or management value. Comment in support of the preservation of the cultural resources of KWA.

Response: comments noted

6) Comment to the effect that the draft KWA Management Plan does not properly address the mineral rights claimed by Mr. Dusty Sanderson and that this lack of acknowledgement of that claims might limit Mr. Sanderson's ability to develop his mineral rights. Other comments to the effect that the KWA Management Plan appears to limit road development, adverse effects on scenic vistas, strong seismic ground shaking, and objectional odors, and those limits would affect Mr. Sanderson's right to develop his mineral interests.

Response: page 9 of the KWA Management Plan outlines the purpose of a Fish and Game Management Plan. A Fish and Game Management Plan considers the Department's interest in the land, describes the area's biological resources, and outlines potential Department management actions. To the extent there are pre-existing rights or claims at the KWA (whether oil, gas, mineral or other), a Wildlife Area Management Plan will not eliminate or contravene them. Future activities proposed to be conducted on the KWA (including activities of third-parties in connection with any pre-existing oil, gas, mineral or other interests) will be part of projects that will require further analysis pursuant to the California Environmental Quality Act (CEQA).

7) Several comments in support of the draft KWA Management Plan in general, especially the habitat restoration elements and the prohibition of the recreational use of off-road vehicles.

Response: comments noted.

8) Request that the Department of Fish and Game reconsider its reasons for not designating the KWA as a state wilderness area. Additional related comments regarding how the use of bicycles at KWA may negatively affect the future possibility of a wilderness designation. Additionally, a request that the Department of Fish and Game prohibit bicycles from using any portion of the KWA east of the Berryessa-Knoxville Road.

Response: The Department stands by its evaluation of, and stated reasons for not designating the Knoxville Wildlife Area as wilderness (see pages 55-59 of the Plan). Wilderness designation does not facilitate DFG management nor accommodate all non-motorized compatible uses of the Wildlife Area. No changes to the Management Plan were made due to this comment.

9) Comment in support of allowing bicycles at the KWA and appreciation that the Management Plan recognizes bicycle use as a compatible public use. Additional comment requesting that any restrictions on access to trails by trail user groups due to erosion or muddy conditions be reasonable and equitably placed on all users (foot, horse, and bike).

Response: comments noted.

10) Request that the DFG work with bike and hike interest groups in designing additional formally-approved foot and/or bike trails that might link to other trails on public land. Specific interests were expressed in making a hiking link to the planned Blue Ridge trail on BLM lands that lie to the east of Knoxville Wildlife Area on top of Blue Ridge, a link from the top of Long Canyon to BLM lands at the north end of Blue Ridge, and finding appropriate bike linkage for bike users because of their ability to cover long distances.

Response: If DFG staff are assigned to work on trail maintenance, trail improvements, or new trail construction at the KWA, we will collect input from, and coordinate trail development with interested trail user groups (for example: the Blue Ridge Berryessa Natural Area (BRBNA) trail group) as much as possible.

11) Opposition to habitat manipulation for “enhancing” game species at the expense of other plant and wildlife species.

Response: Habitat manipulation for game species may involve the development of improved foraging opportunities, improved roosting or sheltering sites, improved water sources, or other critical elements which may be limited on the wildlife area. For example, controlling invasive weeds through various integrated techniques provide added benefits to all wildlife. Wildlife preservation activities

such as these are normally covered under the same class 7 exemption (Title 14 Section 757 Exempt Project (7) Class 7 (D) “Vegetation development, manipulation, or fertilization to increase habitat productivity for fish and wildlife,” or (F) “Developing springs and waterholes and artificial wildlife watering devices for fish and wildlife maintenance or enhancement purposes.” Additional environmental analysis and documentation will be completed prior to any management activities that have the potential to have a significant impact on the environment. This Management Plan and the public review process qualify as the environmental documentation for those wildlife improvement projects which otherwise fall under the Title 14, section 757 mentioned above.